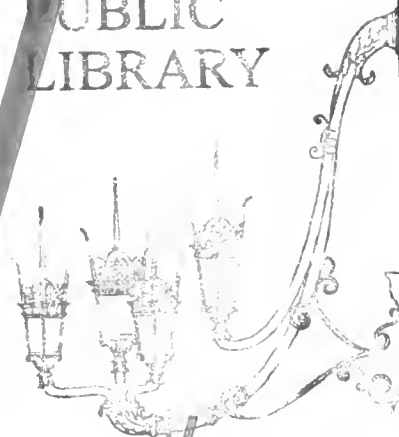


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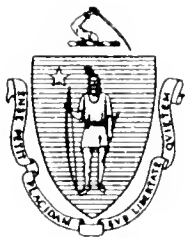
# 1999 Annual Report

Vital Statistics of Massachusetts

Massachusetts Department of Public Health  
Public Document No. 1

GOVDOC  
6457  
.1  
1999





The Commonwealth of Massachusetts  
Executive Office of Health and Human Services  
Department of Public Health  
Registry of Vital Records and Statistics  
150 Mt. Vernon Street, 1<sup>st</sup> Floor  
BOSTON MA 02125-3105

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SECRETARY

PAUL J. COTE, JR

COMMISSIONER

September, 2006

To the Honorable Clerks of the  
Senate and House of Representatives:

We have the honor to submit as required by Chapter 111, Section 2 of the General Laws, the one hundred fifty-eighth annual report on statistics of births, deaths, marriages and divorces in Massachusetts for calendar year 1999. The information will also be available to the public via the Department of Public Health website at <http://www.mass.gov/dph>.

Since 1964, the ANNUAL REPORT OF VITAL STATISTICS has been published by the Department of Public Health and is intended to assist in the development of policy and programmatic initiatives within the Department, as well as to provide State officials and agencies, and the general public, with valuable statistical information.

Sincerely,

A handwritten signature in cursive script that reads "Stanley E. Nyberg".

Stanley E. Nyberg, Ph.D.  
Registrar



**ANNUAL REPORT  
VITAL STATISTICS OF MASSACHUSETTS  
PUBLIC DOCUMENT #1  
1999**

**THE COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF PUBLIC HEALTH**

**MITT ROMNEY, GOVERNOR  
KERRY HEALEY, LIEUTENANT GOVERNOR  
TIMOTHY R. MURPHY, SECRETARY OF HEALTH AND HUMAN SERVICES  
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**August 2006**



## ACKNOWLEDGEMENTS

This publication of the 1999 ANNUAL REPORT OF VITAL STATISTICS is the result of the combined efforts of all data providers, including the 351 city and town clerks, hospital personnel, physicians, funeral directors, probate courts, clinics, and Department of Public Health personnel. We gratefully acknowledge the assistance provided by all data providers, without whose efforts there would be no vital statistics.

Department of Public Health staff most significantly involved in the production of the 1999 ANNUAL REPORT OF VITAL STATISTICS include:

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Advance Data: Births 1999: Figures B-4, B-5, B-6, B-7, B-8, B-9, B-10, B-11 and D-3; as well as, Tables B-1, B-2a, B-2b, B-3a, B-3b, B-4, B-5a, B-5b, B-8, B-9, B-10, B-11, B-12, B-13, B-13a, B-14a, B-14b, B-14c, and D-2.

Advance Data: Deaths 1999: Figures C-1, C-2, C-3, and C-4; as well as, tables C-1, C-2, C-3, C-3b, C-4, C-5, C-5b, C-6, C-7, C-8, and C-9, C-10, C-11, C-12, C-14a, C-14b, C-14c, D-1, D-3, and D-4.

Jane Purtill, Director, Statistics Unit: supervision of data collection, coding and editing.

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The joint efforts of all the staff of the Registry of Vital Records and Statistics are necessary to produce the data contained in this publication. Special acknowledgement is made to the following Registry supervisors:

Howard Wong, Director of Systems and Development, who is responsible for all the computer-based systems in the Registry office;

Pedro Fidalgo, Operations Unit Supervisor, who is responsible for all printing and mailing of forms;

Pailine McNulty, Registration Unit Director, who is responsible for coordination with cities and towns, funeral directors, courts and the overall registration and amendment process;

June Deloney, Registration Unit Supervisor, who is responsible for coordinating timely and accurate document processing.

The 1999 ANNUAL REPORT OF VITAL STATISTICS has been compiled and produced under the general supervision and direction of:

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Massachusetts Department of Public Health publications and materials can be accessed on the Internet.

World Wide Web: Go to, <http://www.mass.gov/dph/rvrs>, and look under publications.



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#### Registry of Vital Records and Statistics Staff

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## INTRODUCTION

The ANNUAL REPORT OF VITAL STATISTICS (Public Document No. 1) has been published continuously since 1842. This is the 36th edition produced by the Department of Public Health. This report, required under the provisions of Chapter 111, section 2, of the Massachusetts General Laws, tabulates data on Massachusetts births, fetal deaths, deaths, marriages, divorces, and population for calendar year 1999. The report provides its users with an overview of the health status of the Massachusetts population. The report can be accessed at <http://www.mass.gov/dph>.

Vital statistics data may be tabulated either in terms of resident data or occurrence data. Resident data include all events, which occur to residents of the Commonwealth, wherever the events occur. Occurrence data include all those events, which occur within the state, including those which occur to out-of-state residents. There is an interstate exchange of copies of birth, and death records among the fifty states, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and all Canadian provinces. These records are exchanged for statistical purposes only, for events, which occur in states other than where the individual resides. This exchange allows each of the states and provinces to track the births and deaths of their residents. The majority of the data presented in this report for births and deaths is based on resident data. Marriage, divorce, and fetal death data, however, only reflect events that occurred within the Commonwealth.

## REGISTRATION

The first government-operated system of vital events registration anywhere in the world began in the Commonwealth of Massachusetts in 1639 under colonial administration. Prior to that time, in countries with a vital registration system such as England, the responsibility for the registration of vital events had been placed on church officials. The Massachusetts system mandated the registration of vital events by the clerks of the communities. In 1842, the Massachusetts legislature established the first statewide coordination for the registration of these events by requiring that copies of the events registered in the local cities and town is sent to the Secretary of State. The first year of collection was designated for 1841. The collection of data and the production of the ANNUAL REPORT OF VITAL STATISTICS has continued since then. With the exception of the administrative location of the State Registry, the actual mechanics of the system have changed remarkably little over the years.

With limited exceptions, most vital records in Massachusetts are open records. For open birth and death records, there is a triple registration process in Massachusetts. The event is first recorded in the city or town where the event occurred. The clerk of that community was then required to forward a certified copy of the record to both the community where the person resided at the time of the event and to the State Registry<sup>1</sup>. Certified copies of the records may be issued from local or state records. If the record is a restricted birth record, such as those of out-of-wedlock births, the registration occurs only in the community where the event occurred and in the state office unless the mother gives permission for the resident community to receive a copy. For the 1999 marriage records, the

---

<sup>1</sup> Beginning in 2000, originals of records are forwarded to the State Registry, with attested copies kept at the communities of residence and occurrence.

event is recorded only in the community where the notice of intention to marry was filed and at the State Registry.

In addition to receiving a legal copy of each birth record from the city or town in which the birth occurred, the State Registry also receives information about the birth record directly from the hospital or birthing center where the birth occurred. These data include confidential medical information in addition to the legal information. This medical information is processed to produce the statistical information on births contained in this report.

Since 1986, the State Registry has developed a program of direct electronic transmission of birth records from hospitals. The system used in Massachusetts is called the Electronic Birth Certificate (EBC). Most birth records are now received through this method. EBC has contributed to reducing processing time at both the hospital and the State Registry, while the system's built-in edits increase the quality of the data.

The process for creating death certificates is the most complex of all vital records. Complete and accurate death records are dependent upon the following individuals: 1.) Certifier, who not only initiates the death registration process but also determines the cause of death as well as the place, time, and date of death; 2.) Funeral Director, who plays the role of facilitator in the death registration process and adds the personal data concerning the decedent, which are supplied by an informant; 3.) Burial Agent, who both issues the permit that allows the chosen disposition to take place and serves as the initial acceptor of the death certificate for official registration; and, 4.) City or Town Clerk, who records the death certificate, issues certified copies of same and forwards a copy of the death record to the Registry of Vital Records and Statistics and other communities as required by law.

Beginning in 1999, the ICD-10 (International Classification of Diseases- Tenth Revision) replaced the ninth revision as a means of classifying cause of death. The ICD-10, developed by the World Health Organization, is an international classification system employed by the United States in order to promote international comparability in collecting, classifying, and tabulating mortality statistics.

The Registry of Vital Records and Statistics receives directly from hospitals or physicians the fetal death reports for fetuses of either twenty or more weeks gestation or weighing at least 350 grams. There are no local filings of fetal death reports.

Marriage licenses may be issued from any of the 351 cities or towns regardless of where the marriage is to take place. The community issuing the license is required to submit an attested copy of the marriage record to the State Registry.

Abstracts of divorces granted are also sent directly to the State Registry from the Registers of Probate from each county probate court.



## STATISTICAL PROCESSING AND TABULATING

The records received in the State Registry are carefully examined for legal errors and inconsistencies. As part of the computerization process, errors and inconsistencies are queried and corrected. A computerized hospital query program is part of the EBC program. The Registry also has a data quality assurance program that includes on-site instruction for clerks and hospital personnel who have reporting difficulties, and training for all groups involved in the data collection process.

Annually, when registration is considered as complete as possible, statistics are aggregated for presentation in this report and in special studies, and for program monitoring and surveillance.

Anyone using statistical information for comparisons over time should be aware of inconsistencies and changing conventions for classification and coding. This is particularly important when using cause of death information. Codes used for classifying cause of death in this report are based on the Tenth Revision of the International Classification of Diseases, World Health Organization. Classification of variables such as race, nativity, and marital status may also differ over time.

In order to help ensure individual privacy, the Registry of Vital Records and Statistics uses cell size suppression in almost all cases where the number of individuals is less than 5. However, previously published tables are rereleased without being edited.

It is hoped that this report will be useful to a wide range of health data users in the Commonwealth, as well as to educational planners, demographers, and historians. Questions concerning these data and requests for more detailed findings should be directed to:

Massachusetts Department of Public Health  
Registry of Vital Records and Statistics  
150 Mount Vernon Street  
Boston, Massachusetts 02125-3105  
(617) 740-2670



## VITAL EVENTS



## SECTION A

### VITAL EVENTS

#### HIGHLIGHTS

#### BIRTHS

- In 1999, there were 80,866 births to Massachusetts residents.
- Births decreased by 0.7% from 1998 to 1999.
- The 1999 Massachusetts birth rate per 1,000 residents was 12.8, a decrease of 2.3% from the birth rate of 13.1 in 1998.
- Massachusetts' 1999 birth rate of 12.8 per 1,000 residents was below the 1999 US rate of 14.5.
- The most births occurred in July (9.0%--7,272 births); the fewest births occurred in February (7.4%--6,002 births).

#### DEATHS

- In 1999, 55,763 Massachusetts residents died.
- The number of resident deaths increased by 1.0% from 1998 to 1999.
- The Massachusetts crude death rate decreased from 8.9 deaths per 1,000 residents in 1998 to 8.8 in 1999. The 1999 US crude death rate of 858.3 deaths per 100,000 residents was lower than the 1998 US crude death rate of 864.7. The 1999 age-adjusted death rate in Massachusetts (8.2 per 1,000 residents) was lower than the US age-adjusted death rate (8.8).
- The most deaths in 1999 occurred in January (9.7%--5,432); the fewest occurred in September (7.3%--4,094).

#### FETAL DEATHS

- There were 426 reportable fetal deaths to Massachusetts residents in 1999.
- The number of reportable fetal deaths decreased by 22 from 1998 to 1999, resulting in a fetal death rate of 5.3 per 1,000 live births.

## INFANT DEATHS

- In 1999, 418 infant deaths (less than 1 year of age) occurred to Massachusetts residents.
- The 1999 Massachusetts infant mortality rate of 5.2 deaths per 1,000 live births was a slight increase from the 1998 infant mortality rate of 5.1 deaths per 1,000 live births.
- The black non-Hispanic infant mortality rate increased from 10.6 in 1998 to 12.3 in 1999.
- The Massachusetts 1999 infant mortality rate of 5.2 per 1,000 live births was 22.4% below the US rate of 6.7.

## MARRIAGES

- In 1998, there were 39,425 marriages in Massachusetts.
- The number of marriages in Massachusetts decreased by 1.8% from 1998 to 1999.
- The 1999 Massachusetts rate of 6.2 marriages per 1,000 population was below the US rate of 8.3.
- The most marriages occurred in October (13.5%--5,329); the fewest occurred in January (3.1%--1,236).

## DIVORCES

- In 1999, 15,632 divorces were granted in Massachusetts.
- Divorces in Massachusetts increased by 2.4% from 1998 to 1999.
- The 1999 Massachusetts divorce rate of 2.5 divorces per 1,000 population was below the US rate of 4.1.
- The largest number of divorces were finalized in June (1,463--9.4%), and the fewest in November (1,137--7.3%).

## NATURAL INCREASE

- The rate of natural increase in the Massachusetts resident population decreased from 4.2 per 1000 residents in 1998 to 4.0 in 1999.
- The 1999 US natural increase rate of 5.6 remains above that of Massachusetts.

The Vital Events section provides basic information on all vital events. In addition to the information highlighted above, this section contains summary birth and death data by city, town and county. More detailed information is contained in the sections on the individual events.

#### DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:

##### LIVE BIRTH

A live birth is any infant who breathes or shows any other evidence of life (such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles) after separation from the mother's uterus, regardless of the duration of gestation.

##### FETAL DEATH

A fetal death is a death prior to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy; the death is indicated by the fact that after such separation the fetus does not breathe or show any other evidence of life, such as the beating of the heart, pulsation of the umbilical cord, or definite movement of the voluntary muscles.

Massachusetts law requires that fetal deaths of 20 or more weeks gestation or weighing at least 350 grams be reported; therefore, the fetal deaths referred to in this report are of that gestational age or weight.

##### INFANT DEATH

Death of a child whose age is less than one year.

##### MISER

The Massachusetts Institute for Social and Economic Research. This research institute, which was located at the University of Massachusetts in Amherst, produced the official 1999 population estimates and projections for the Commonwealth.

##### NATURAL INCREASE

The difference between the number of resident live births and the number of resident deaths.

##### NEONATAL DEATH

Death of a child whose age is less than 28 days.

## OCCURRENCE

Occurrence data reflect where the event took place without regard to residence. In Massachusetts, place of occurrence will be one of 351 cities or towns.

## RESIDENCE

The usual place of residence as reported by the mother (for births) or the informant (for deaths). An infant's residence is considered that of the mother. While occurrence data include only events that occurred within Massachusetts, residence data for births and deaths include those which may or may not have occurred in Massachusetts.

### CRUDE RATES OF VITAL EVENTS:

BIRTH RATE	$\frac{\text{No. of Resident Live Births}}{\text{Total Resident Population}} \times 1,000$
FETAL MORTALITY RATE	$\frac{\text{Number of Resident Fetal Deaths}}{\text{Resident Live Births} + \text{Resident Fetal Deaths}} \times 1,000$
INFANT MORTALITY RATE	$\frac{\text{No. of Resident Deaths <1 Year}}{\text{Resident Live Births}} \times 1,000$
NEONATAL MORTALITY RATE	$\frac{\text{No. of Resident Deaths <28 Days}}{\text{Resident Live Births}} \times 1,000$
DEATH RATE	$\frac{\text{No. of Resident Deaths}}{\text{Total Resident Population}} \times 100,000$
MARRIAGE RATE	$\frac{\text{No. of Occurrence Marriages}}{\text{Total Resident Population}} \times 1,000$
DIVORCE RATE	$\frac{\text{No. of Occurrence Divorces}}{\text{Total Resident Population}} \times 1,000$



**Table A-1**  
**SELECTED FACTS IN VITAL STATISTICS**  
**MASSACHUSETTS: 1999**

**BIRTH**

Age Range of Mothers: 12-52

Age Range of Fathers: 13-84

Sets of Twins: 1,574

Sets of Triplets: 81

Sets of Quadruplets: 2

Most Births Occurred on: August 10, 1999 (297 births)

Fewest Births Occurred on: December 25, 1999 (125 births)

Highest # of Births at: Brigham and Women's Hospital (9,787)

Lowest # of Births at: Cambridge Birth Center (61 births)

**Twenty Most Popular Names for Boys**

**Twenty Most Popular Names for Girls**

<i>Boys' Names</i>	<i>Number</i>	<i>Boys' Names</i>	<i>Number</i>
Matthew	1,003	Zachary	576
Michael	979	William	561
Nicholas	868	Joshua	532
John	795	Benjamin	522
Ryan	758	Tyler	517
Andrew	695	Kyle	507
Jacob	674	Alexander	500
Joseph	667	James	492
Christopher	663	Anthony	488
Daniel	600	Thomas	479

<i>Girls' Names</i>	<i>Number</i>	<i>Girls' Names</i>	<i>Number</i>
Emily	724	Madison	336
Sarah	560	Nicole	328
Olivia	524	Abigail	322
Samantha	517	Amanda	319
Julia	511	Rachel	311
Hannah	504	Alexis	298
Elizabeth	435	Victoria	295
Emma	424	Lauren	291
Jessica	385	Katherine	288
Ashley	347	Alyssa	278

**DEATH**

Male Decedents 100 Years and Older: 80

Female Decedents 100 Years and Older: 521

Most Deaths Occurred on: February 8, 1999 (218)

Fewest Deaths Occurred on: August 19, 1999 (109)

Month Most Suicides Occurred: July (47)

Month Most Homicides Occurred: December (20)

Month Most Motor Vehicle Deaths Occurred: May (45)

**MARRIAGE**

Ages of Grooms: 16-92 years (average: 33.7)

Ages of Brides: 15-89 years (average: 31.4)

Age of First Time Grooms: 16-84 years (average: 29.8)

Age of First Time Brides: 15-85 (average: 28.1)

Most Popular Month for Marriages: October (5,329)

Least Popular Month for Marriages: January (1,236)

Most Marriages Occurred On: June 26, 1999 (908)

Fewest Marriages Occurred On: February 15, 1999 (2)

Greatest Age Difference When Groom Older than Bride: 51 years

Greatest Age Difference When Bride Older than Groom: 31 years

**DIVORCE**

Length of Marriages Involved in Divorces: < 1 Year to 68 Years of Marriage

Most Common Length of Marriage Prior to Divorce: 3 & 4 years

Month Most Divorces Granted: June (1,463)

Month Fewest Divorces Granted: November (1,137)

Figure A-1

## 1999 Massachusetts Daily Vital Events

Each day in 1999, Massachusetts residents had approximately:

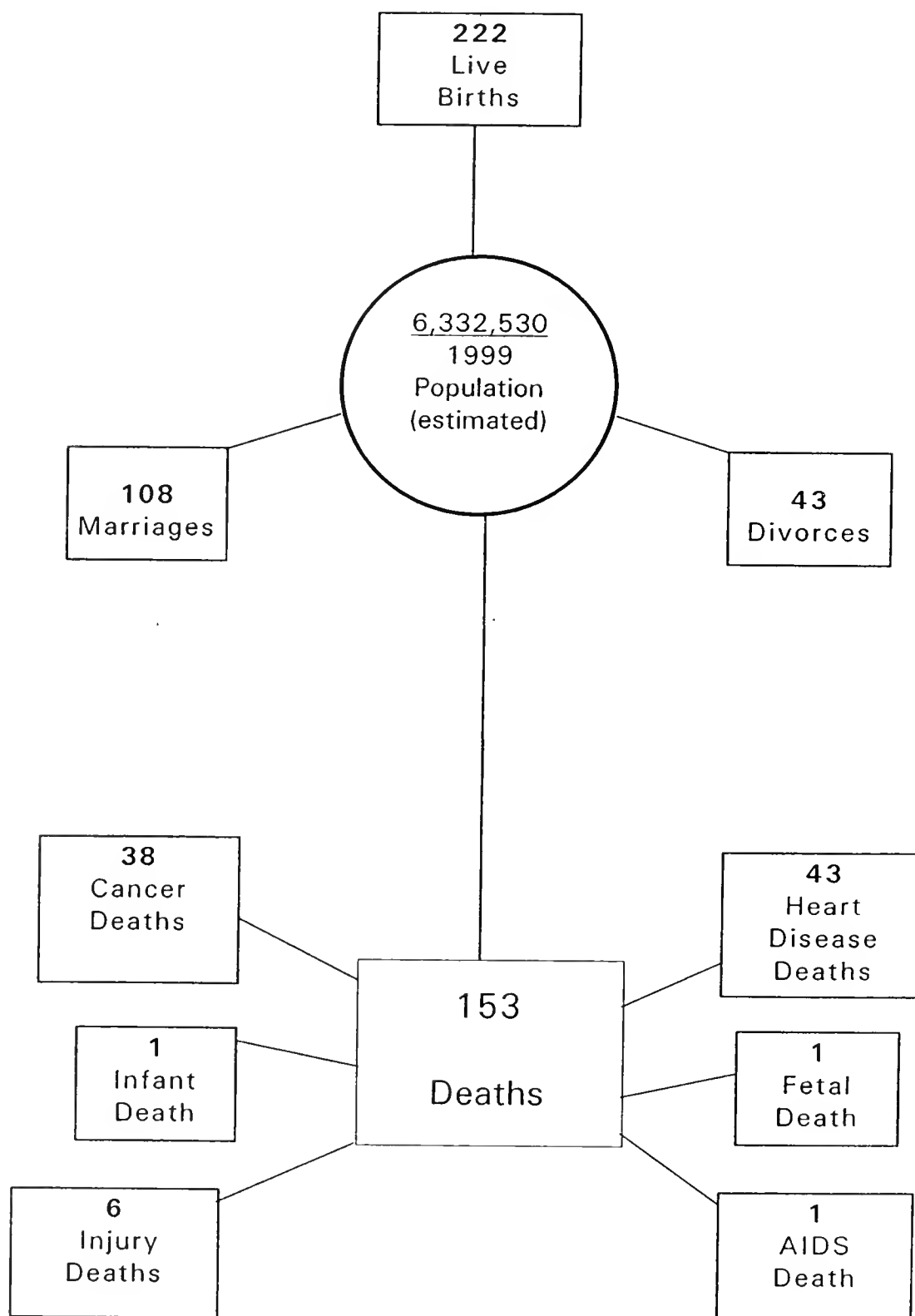


Table A-2. Number and Crude Rates of Vital Events, Massachusetts and United States: 1998-1999

Vital Event	<u>Massachusetts</u>				<u>United States</u>			
	1999		1998		1999		1998	
	Number	Rate*	Number	Rate*	Number	Rate*	Number	% of Rate Change
Births	80,866	12.8	81,406	13.1	3,959,417	14.5	3,941,553	14.6 -0.7
Fetal Deaths	426	5.3	448	5.5	26,528	6.7	NA <sup>1</sup>	NA
Total Deaths	55,763	8.8	55,204	8.8	2,394,871	8.8	2,337,256	8.7 1.1
Infant Deaths	418	5.2	414	5.1	27,937	7.1	28,371	7.2 -1.4
Neonatal Deaths	332	4.1	315	3.9	18,728	4.7	18,918	4.8 -2.1
Marriages	39,425	6.2	38,722	6.2	2,322,109	8.3	2,241,032	8.3 0
Divorces	15,632	2.5	16,010	2.5	1,144,065	4.1	932,772	3.5 17.1
<p>* NOTES: Neonatal and infant deaths are included in total deaths; neonatal deaths are included in infant deaths; fetal deaths are excluded from total deaths.            Figures for marriages and divorces reflect occurrence, not residence.            The rates for live births, marriages and divorces are per 100,000 population; rates for total deaths are per 100,000 population.            Rates for infants and neonatal deaths are per 1,000 live births.            Rates for fetal deaths are per 1,000 live births and fetal deaths.</p>								
<sup>1</sup> Not available.								

Figure A-2a. Births and Deaths in Massachusetts, Selected Years: 1910-1999

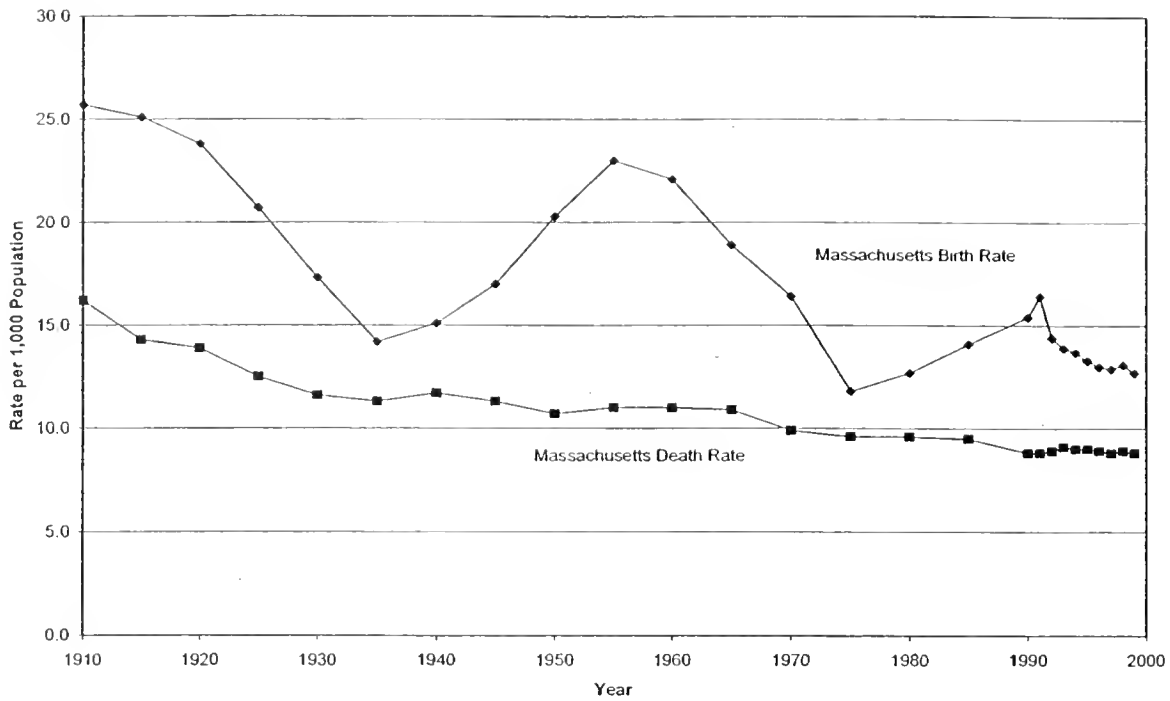
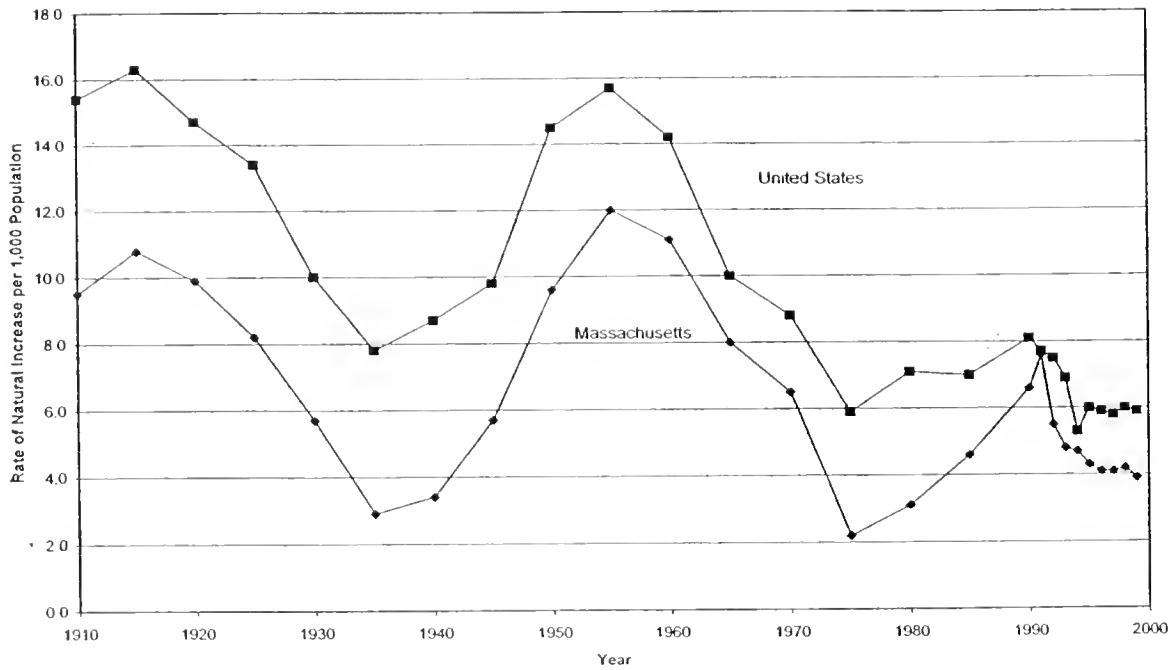


Figure A-2b. Rates of Natural Increase in Massachusetts and the United States, Selected Years: 1910-1999



**Table A-3. Massachusetts Resident Births and Deaths With Resultant Natural Increase**

**Massachusetts: 1900-1999**

<b>Year</b>	<b>Births</b>	<b>Deaths</b>	<b>Natural Increase</b>	<b>Rate/1000 Residents</b>
1900	73,386	51,156	22,230	7.9
1905	75,022	50,486	24,536	8.2
1910	86,539	54,407	32,132	9.5
1915	93,155	53,131	40,024	10.8
1920	91,859	53,632	38,227	9.9
1925	86,014	51,890	34,124	8.2
1930	73,690	49,503	24,187	5.7
1935	62,416	49,634	12,782	2.9
1940	65,369	50,698	14,671	3.4
1945	76,455	50,763	25,692	5.7
1950	95,619	50,359	45,260	9.6
1955	109,610	53,386	56,224	11.6
1960	114,018	56,560	57,458	11.2
1965	100,262	58,853	41,409	7.8
1970	93,582	56,944	36,638	6.4
1975	68,070	53,708	14,362	2.5
1980	72,591	54,934	17,657	3.1
1981	73,930	52,813	21,117	3.7
1982	75,749	52,867	22,882	4.0
1983	76,031	54,150	21,881	3.8
1984	78,197	55,189	23,008	4.0
1985	81,781	55,597	26,184	4.5
1986	82,168	55,860	26,308	4.5
1987	84,345	55,562	28,783	4.9
1988	88,047	56,407	31,640	5.4
1989	91,314	53,748	37,566	6.4
1990	92,461	53,008	39,453	6.6
1991	88,176	53,010	35,166	5.8
1992	87,202	53,804	33,398	5.5
1993	84,627	55,557	29,070	4.8
1994	83,758	54,914	28,844	4.7
1995	81,562	55,296	26,266	4.3
1996	80,164	55,187	24,977	4.0
1997	80,321	54,634	25,687	4.1
1998	81,406	55,204	26,202	4.2
1999	80,866	55,763	25,103	4.0

**Table A-4. Vital Events by Month, Massachusetts Residents: 1999**

		Births	Fetal Deaths <sup>1</sup>	Deaths	Infant Deaths <sup>2</sup>	Neonatal Deaths <sup>2</sup>	Marriages	Divorces
<b>Totals</b>		<b>80,866</b>	426	55,763	418	332	39,425	15,632
<b>January</b>	#	6,351	26	5,432	25	15	1,236	1,282
	Rank	10	11	1	12	12	12	7
<b>February</b>	#	6,002	32	5,265	29	24	1,518	1,158
	Rank	12	9	2	10	8	10	11
<b>March</b>	#	6,748	43	5,241	38	30	1,500	1,456
	Rank	6	2	3	2	3	11	2
<b>April</b>	#	6,662	37	4,420	32	24	2,417	1,228
	Rank	7	4	8	8	8	8	9
<b>May</b>	#	7,172	36	4,369	37	29	4,457	1,227
	Rank	3	7	9	4	4	5	10
<b>June</b>	#	7,047	40	4,262	53	47	4,729	1,463
	Rank	4	3	10	1	1	3	1
<b>July</b>	#	7,272	49	4,443	32	24	4,234	1,412
	Rank	1	1	7	8	8	6	3
<b>August</b>	#	7,175	29	4,140	36	28	4,620	1,351
	Rank	2	10	11	5	7	4	4
<b>September</b>	#	6,960	34	4,094	35	29	5,170	1,316
	Rank	5	8	12	7	4	2	6
<b>October</b>	#	6,619	37	4,660	36	29	5,329	1,256
	Rank	8	4	5	5	4	1	8
<b>November</b>	#	6,267	26	4,520	27	21	2,440	1,137
	Rank	11	11	6	11	11	7	12
<b>December</b>	#	6,591	37	4,917	38	32	1,775	1,346
	Rank	9	4	4	2	2	9	5

<sup>1</sup>Fetal deaths are not included in Births or Deaths. <sup>2</sup>Infant deaths and neonatal deaths are included in total resident deaths; neonatal deaths are included in infant deaths.

TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1999

COMMUNITY	POPULATION (1)	LIVE BIRTHS OCCURRENCE: RESIDENT :	DEATHS OCCURRENCE: RESIDENT :	INFANT DEATHS TOTAL : NEONATAL (2)	MARRIAGES LICENSES: OCCURRENCE ISSUED : (3)	RESIDENT NATURAL INCREASE
STATE TOTAL	6,332,530	81,765	56,596	418	39,410	25,103
ABINGTON	15,111	0	55	1	0	85
ACTION	20,189	1	70	0	0	173
ACUSHNET	10,604	0	12	0	0	27
ADAMS	8,829	0	29	0	0	-67
AGAMAM	28,845	0	357	1	0	-71
ALFORD	417	0	0	0	0	0
AMESBURY	16,271	0	111	4	0	72
AMHERST	37,891	4	85	0	0	49
ANDOVER	31,590	0	146	2	0	120
ARLINGTON	42,776	2	201	1	1,337	93
ASHBURNHAM	5,948	0	11	0	354	22
ASHBY	2,793	0	8	2	421	11
ASHFIELD	1,849	1	2	0	342	9
ASHLAND	14,415	0	16	2	0	179
ATHOL	11,330	0	144	0	0	-7
ATTLEBORO	41,282	1,063	478	3	0	216
AUBURN	15,783	1	92	1	0	-10
AVON	4,460	0	36	0	0	9
AYER	6,288	2	170	0	0	35
BARNSTABLE	47,188	975	1,024	3	164	-46
BARRE	5,144	3	9	0	241	31
BECKET	1,754	1	4	0	506	4
BEDFORD	12,289	1	151	0	75	64
BELCHERTOWN	12,844	0	21	0	0	86
BELLINGHAM	15,567	1	24	5	0	110
BELMONT	25,035	1	83	3	0	67
BERKLEY	5,750	0	7	0	106	82
BERLIN	2,386	1	2	0	0	36
BERNARDSTON	2,119	0	8	0	0	9
BEVERLY	40,210	2,681	647	0	0	67
BILLERICA	38,688	3	111	4	1,284	301
BLACKSTONE	9,020	0	21	0	1,505	37

(1) MISER POPULATION ESTIMATES FOR MASSACHUSETTS CITIES AND TOWNS: JULY 1, 1999. POPULATION PROGRAM, MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH, UNIVERSITY OF MASSACHUSETTS AT AMHERST.

(2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.

(3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.

(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1999

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE :	RESIDENT	OCCURRENCE :	RESIDENT	TOTAL :	NEONATAL	LICENSES: OCCURRENCE ISSUED :	(4)	
STATE TOTAL	6,332,530	81,765	80,866	56,596	55,763	418	332	39,410	39,410	25,103
BLANDFORD	1,212	0	12	5	8	0	0	154	7	4
BOLTON	4,239	0	70	6	18	0	0	0	29	52
BOSTON	576,554	22,576	8,017	8,064	4,491	59	51	0	3,918	3,526
BOURNE	17,834	0	242	121	199	0	0	0	128	43
BOXBOROUGH	4,788	0	62	5	9	0	0	0	25	53
BOXFORD	8,378	0	96	8	29	0	0	0	6	67
BOYLSTON	3,907	0	42	2	23	0	0	0	59	19
BRAINTREE	34,095	0	447	405	423	2	2	241	154	24
BREWSTER	10,110	1	61	150	123	1	0	52	172	-62
BRIDGEWATER	25,480	0	303	40	132	1	1	155	96	171
BRIEFIELD	3,358	1	34	9	29	0	0	41	23	5
BROCKTON	92,700	2,405	1,451	1,246	840	6	5	0	488	611
BROOKFIELD	3,136	0	38	11	40	0	0	0	17	-2
BROOKLINE	58,917	2	589	199	405	1	1	0	317	184
BUCKLAND	1,973	0	17	7	21	0	0	0	9	-4
BURLINGTON	24,082	1	323	602	149	0	0	0	118	174
CAMBRIDGE	98,868	1,980	1,062	872	648	4	3	0	825	414
CANTON	20,530	0	288	131	238	0	0	983	93	50
CARLISLE	4,634	1	64	3	13	0	0	2,173	25	51
CARVER	11,414	1	130	27	110	2	2	1,264	57	20
CHARLEMONT	1,325	0	11	4	10	0	0	205	29	1
CHARLTON	11,242	0	156	38	72	2	2	0	42	84
CHATHAM	6,728	1	39	81	133	1	1	0	199	-94
CHELMSFORD	34,524	1	395	125	259	3	3	0	186	136
CHELSEA	31,956	2	641	267	307	0	0	0	251	334
CHESHIRE	3,657	0	26	15	31	0	0	0	12	-5
CHESTER	1,402	0	15	3	9	0	0	0	3	6
CHESTERFIELD	1,162	1	10	1	3	0	0	135	6	7
CHICOPEE	53,873	2	595	287	674	4	4	213	319	-79
CHILMARK	818	0	6	6	8	0	0	108	51	-2
CLARKSBURG	1,772	0	16	1	14	0	0	12	4	2
CLINTON	13,508	0	154	102	129	0	0	0	78	25

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TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1999

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE :	RESIDENT :	OCCURRENCE :	RESIDENT :	TOTAL :	NEONATAL (2)	LICENSES : ISSUED :	OCCURRENCE :	
STATE TOTAL	6,332,530	81,765	80,866	56,596	55,763	418	332	39,410	39,410	25,103
COHASSET	7,463	0	106	46	74	1	1	0	106	32
COLRAIN	1,825	0	11	5	10	0	0	0	15	1
CONCORD	18,271	1,480	158	378	160	0	0	0	147	-2
CONWAY	1,811	0	12	4	11	0	0	0	7	1
CUMMINGTON	917	1	9	1	4	0	0	0	0	5
DALTON	6,876	1	69	55	81	0	0	670	54	-12
DANVERS	25,523	0	269	300	269	1	1	473	316	0
DARTMOUTH	31,019	2	229	100	257	1	0	1,151	172	-28
DEDHAM	23,288	0	285	117	248	1	1	515	180	37
DEERFIELD	5,109	1	53	10	35	0	0	0	63	18
DENNIS	15,139	1	136	146	243	0	0	0	127	-107
DIGHTON	6,316	0	66	18	41	0	0	0	37	25
DOUGLAS	6,744	0	101	11	37	1	1	0	19	64
DOVER	5,763	0	68	4	31	0	0	0	16	37
DRACUT	28,585	0	360	45	204	4	4	0	104	156
DUDLEY	10,009	0	100	17	94	0	0	300	45	6
DUNSTABLE	2,893	0	40	3	8	0	0	125	5	32
DUXBURY	14,862	0	192	86	123	0	0	305	104	69
EAST BRIDGEWATER	13,322	0	183	35	97	1	1	80	70	86
EAST BROOKFIELD	2,166	0	27	8	26	0	0	0	18	1
EAST LONGMEADOW	14,435	0	133	244	158	1	1	0	68	-25
EASTHAM	5,170	0	39	27	59	0	0	0	35	-20
EASTHAMPTON	15,963	2	186	30	153	1	0	0	89	33
EASTON	22,437	0	278	90	131	2	2	0	135	147
EDGARTOWN	3,870	0	49	8	28	0	0	0	235	21
EGREMONT	1,312	0	8	6	20	0	0	2,631	3	-12
ERVING	1,484	0	15	5	14	0	0	2,697	5	1
ESSEX	3,240	1	34	9	25	0	0	1,449	28	9
EVERETT	37,494	1	520	478	356	1	1	1,269	203	164
FAIRHAVEN	16,119	0	139	132	217	1	1	0	96	-74
FALL RIVER	90,655	1,576	1,097	1,421	1,109	10	6	0	613	-12
FALMOUTH	30,970	623	275	508	387	3	2	0	471	-112

(1) MISER POPULATION ESTIMATES FOR MASSACHUSETTS CITIES AND TOWNS: JULY 1, 1999. POPULATION PROGRAM, MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH, UNIVERSITY OF MASSACHUSETTS AT AMHERST.

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TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1999

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE :	RESIDENT :	OCCURRENCE :	RESIDENT :	TOTAL :	NEONATAL (2)	LICENSES:OCCURRENCE ISSUED :	(3) :	
STATE TOTAL	6,332,530	81,765	80,866	56,596	55,763	418	332	39,410	39,410	25,103
FITCHBURG	39,613	3	566	335	439	3	2	0	210	127
FLORIDA	768	0	3	3	8	0	0	0	3	-5
FOXBOROUGH	16,462	0	236	39	128	0	0	0	108	108
FRAMINGHAM	66,773	2,428	1,000	632	533	6	6	42	383	467
FRANKLIN	29,267	0	504	82	178	3	1	236	117	326
FREETOWN	8,896	1	85	9	40	0	0	36	145	45
GARDNER	21,154	532	235	311	247	0	0	6	142	-12
GAY HEAD	314	0	2	7	1	0	0	0	31	1
GEORGETOWN	7,543	0	121	11	40	0	0	0	30	81
GILL	1,523	0	16	1	8	0	0	0	11	8
GLOUCESTER	29,905	0	350	297	296	4	4	0	305	54
GOSHEN	923	0	2	1	7	0	0	0	5	-5
GOSNOLD	123	0	1	0	0	0	0	0	4	1
GRAFTON	14,881	0	207	25	111	2	2	1,212	69	96
GRANBY	6,063	0	66	10	46	2	2	630	26	20
GRANVILLE	1,518	0	17	0	7	0	0	1,115	11	10
GREAT BARRINGTON	7,828	169	75	221	114	0	0	498	67	-39
GREENFIELD	18,031	536	193	404	257	2	1	0	99	-64
GROTON	9,401	1	165	18	40	0	0	0	135	125
GROVELAND	6,041	0	83	9	42	0	0	0	17	41
HADLEY	4,663	0	35	67	60	0	0	0	37	-25
HALIFAX	7,513	0	105	16	62	2	2	0	45	43
HAMILTON	8,427	0	115	13	35	0	0	0	57	80
HAMPDEN	4,891	0	49	39	44	2	1	1,014	29	51
HANCOCK	727	0	5	4	6	0	0	647	9	-1
HANOVER	13,412	0	191	28	99	1	1	743	72	92
HANSON	9,429	0	129	16	60	1	1	334	77	69
HARDWICK	2,684	0	34	11	32	1	0	0	14	2
HARVARD	9,885	0	50	8	25	0	0	0	57	25
HARWICH	11,828	0	90	107	201	1	0	0	127	-111
HATFIELD	3,205	2	26	9	32	0	0	0	15	-6
HAVERHILL	58,119	354	921	623	569	2	1	0	358	352

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TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1999

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT INCREASE
		OCCURRENCE :	RESIDENT :	OCCURRENCE :	RESIDENT :	TOTAL :	NEONATAL (2)	ISSUED :	OCCURRENCE	
STATE TOTAL	6,332,530	81,765	80,866	56,596	55,763	418	332	39,410	39,410	25,103
HAWLEY	339	0	1	0	3	0	0	0	3	-2
HEATH	822	0	6	3	7	0	0	3,375	3	-1
HINGHAM	20,530	0	279	126	187	0	0	288	159	92
HINSDALE	2,009	0	31	10	19	0	0	594	6	12
HOLBROOK	11,017	0	116	40	115	2	2	241	54	11
HOLDEN	15,875	2	166	63	105	0	0	0	57	61
HOLLAND	2,412	0	23	5	10	0	0	0	3	13
HOLLISTON	14,432	1	153	24	78	0	0	0	76	75
HOLYOKE	40,504	484	603	819	557	3	1	0	327	46
HOPEDALE	6,071	2	73	38	58	1	1	0	26	15
HOPKINTON	12,756	0	200	16	55	0	0	0	45	145
HUBBARDSTON	3,844	0	64	2	19	1	1	903	14	45
HUDSON	17,951	3	260	31	112	0	0	1,103	100	148
HULL	11,200	1	112	26	80	0	0	900	43	32
HUNTINGTON	2,236	0	23	0	12	0	0	1,661	7	11
IPSWICH	12,566	0	162	67	128	0	0	0	135	34
KINGSTON	11,242	0	180	72	110	3	2	0	59	70
LAKEVILLE	9,668	0	123	30	75	0	0	0	40	48
LANCASTER	7,432	1	68	43	48	1	1	0	22	20
LANESBOROUGH	3,110	0	25	4	18	0	0	0	16	7
LAWRENCE	71,228	1,432	1,411	587	517	8	7	0	342	894
LEE	5,937	0	53	59	81	0	0	0	42	-28
LEICESTER	10,439	0	121	83	90	3	2	0	47	31
LENEX	4,931	2	42	63	98	0	0	0	148	-56
LEOMINSTER	41,631	1,410	575	474	346	2	1	0	235	229
LEVERETT	1,867	1	12	2	5	0	0	0	17	7
LEXINGTON	31,090	1	241	240	269	1	1	0	195	-28
LEYDEN	777	0	5	1	5	0	0	0	7	0
LINCOLN	8,563	3	100	9	34	1	1	0	91	66
LITTLETON	8,048	1	125	54	64	0	0	0	61	41
LONGMEADOW	15,460	1	136	121	203	1	1	0	49	-67
LOWELL	105,854	2,708	1,676	1,311	916	14	9	0	555	760

(1) MISER POPULATION ESTIMATES FOR MASSACHUSETTS CITIES AND TOWNS: JULY 1, 1999. POPULATION PROGRAM, MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH, UNIVERSITY OF MASSACHUSETTS AT AMHERST.

(2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.

(3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.

(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1999

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT INCREASE
		OCCURRENCE :	RESIDENT :	OCCURRENCE :	RESIDENT :	TOTAL :	NEONATAL (2)	ISSUED :	OCCURRENCE (3)	
STATE TOTAL	6,332,530	81,765	80,866	56,596	55,763	418	332	39,410	39,410	25,103
LUDLOW	19,693	1	206	47	180	0	0	0	133	26
LUNENBURG	9,394	0	108	19	58	0	0	0	74	50
LYNN	86,298	2	1,387	682	819	8	6	0	463	568
LYNNFIELD	11,799	0	131	13	75	0	0	0	96	56
MALDEN	55,064	1	788	184	496	4	4	0	304	292
MANCHESTER	5,391	0	48	21	43	0	0	0	51	5
MANSFIELD	21,476	0	397	23	95	2	0	0	75	302
MARBLEHEAD	20,771	1	283	87	158	1	1	0	132	125
MARION	5,560	0	51	49	51	0	0	0	43	0
MARLBOROUGH	35,157	1	562	284	238	3	3	0	149	324
MARSHFIELD	23,822	2	402	44	152	0	0	0	114	250
MASHPEE	11,568	0	131	56	96	0	0	0	148	35
MATTAPOISETT	6,249	0	71	19	53	0	0	0	58	18
MAYNARD	10,585	0	135	19	64	0	0	0	40	71
MEDFIELD	12,213	0	162	25	70	0	0	0	22	92
MEDFORD	56,916	3	638	602	573	4	3	0	318	65
MEDWAY	12,101	0	203	50	67	0	0	0	57	136
MELROSE	26,912	2,226	359	524	300	1	1	0	120	59
MENDON	5,125	1	77	3	27	0	0	0	33	50
MERRIMAC	6,337	0	82	9	34	0	0	0	17	48
METHUEN	42,966	1,314	537	528	406	2	2	0	220	131
MIDDLEBOROUGH	19,983	0	261	105	159	3	3	0	132	102
MIDDLEFIELD	503	0	3	0	0	0	0	0	3	3
MIDDLETON	7,056	0	86	10	32	0	0	0	50	54
MILFORD	25,897	602	360	396	216	1	1	0	118	144
MILLBURY	12,636	0	135	160	129	0	0	0	49	6
MILLIS	7,836	0	150	5	40	0	0	0	82	110
MILLVILLE	2,786	0	42	1	16	0	0	0	11	26
MILTON	26,725	1	325	286	231	3	3	0	190	94
MONROE	102	0	1	1	2	0	0	0	2	-1
MONSON	8,835	0	105	20	50	0	0	0	33	55
MONTAGUE	8,095	1	110	35	85	1	1	0	46	25

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TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1999

COMMUNITY	POPULATION (1)	LIVE BIRTHS OCCURRENCE: RESIDENT	DEATHS OCCURRENCE: RESIDENT	INFANT DEATHS TOTAL: NEONATAL (2)	MARRIAGES LICENSES: OCCURRENCE ISSUED: (3)	RESIDENT NATURAL INCREASE
STATE TOTAL	6,332,530	81,765	56,596	418	39,410	25,103
MONTEREY	925	1	2	0	0	10
MONTGOMERY	709	0	6	0	0	1
MOUNT WASHINGTON	152	0	2	0	0	5
NAHANT	3,748	0	34	0	0	0
NANTUCKET	8,651	89	20	4	0	94
NATICK	32,094	2	60	4	0	45
NEEDHAM	28,427	1	415	1	0	190
NEEDHAM	238	3	383	0	0	70
NEW ASHFORD	94,347	1,533	1,399	8	0	0
NEW BEDFORD	997	0	1	0	0	111
NEW BRAINTREE	1,538	0	15	0	0	3
NEW MARLBOROUGH	898	0	4	0	0	6
NEW SALEM	6,666	0	7	0	0	6
NEWBURY	16,988	0	10	0	0	44
NEWTON	87,211	964	334	1	0	48
NORFOLK	10,506	3,646	596	1	0	213
NORTH ADAMS	15,675	0	12	0	0	106
NORTH ANDOVER	26,785	307	247	0	0	29
NORTH ATTLEBORO	26,858	0	178	2	0	67
NORTH BROOKFIELD	4,893	0	80	5	0	137
NORTH READING	13,250	0	10	0	0	210
NORTHAMPTON	29,435	880	51	2	0	5
NORTHBOROUGH	13,698	1	582	1	0	93
NORTHBRIDGE	13,573	0	43	2	0	-102
NORTHFIELD	2,955	0	166	0	0	106
NORTON	17,214	0	37	0	0	34
NORWELL	9,981	0	58	0	0	-4
NORWOOD	28,779	0	86	0	0	24
OAK BLUFFS	3,692	622	650	0	0	89
OAKHAM	1,762	121	316	0	0	64
ORANGE	7,710	0	69	0	0	169
ORLEANS	6,434	0	4	0	0	77
		0	9	0	0	5
		0	47	0	0	35
		0	104	0	0	125
		0	104	0	0	-76

(1) MISER POPULATION ESTIMATES FOR MASSACHUSETTS CITIES AND TOWNS: JULY 1, 1999. POPULATION PROGRAM, MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH, UNIVERSITY OF MASSACHUSETTS AT AMHERST.

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(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1999

COMMUNITY	POPULATION (1)	LIVE BIRTHS OCCURRENCE: RESIDENT :	DEATHS OCCURRENCE: RESIDENT :	INFANT DEATHS TOTAL : NEONATAL (2)	MARRIAGES LICENSES: OCCURRENCE ISSUED : (3) : (4)	RESIDENT NATURAL INCREASE
STATE TOTAL	6,332,530	81,765 : 80,866	56,596 : 55,763	418 : 332	39,410 : 39,410	25,103
OTIS	1,281	0	3	0	0	3
OXFORD	13,457	1	56	2	0	23
PALMER	12,564	0	111	0	0	5
PAXTON	4,551	0	3	0	0	8
PEABODY	49,595	0	406	4	0	61
PELHAM	1,463	1	4	0	0	1
PEMBROKE	16,433	0	28	3	0	195
PEPPERELL	11,435	2	12	0	0	127
PERU	850	0	0	0	0	5
PETERSHAM	1,212	0	10	0	0	-5
PHILLIPSTON	1,814	0	0	0	0	9
PITTSFIELD	46,284	843	771	1	0	-62
PLAINFIELD	594	0	3	0	0	1
PLAINVILLE	7,913	0	16	0	0	49
PLYMOUTH	51,447	780	603	4	0	315
PLYMPTON	2,690	0	3	0	0	11
PRINCETON	3,470	1	1	1	0	18
PROVINCETOWN	3,372	1	31	0	0	21
QUINCY	87,570	4	716	4	0	-36
RANDOLPH	31,630	1	115	0	0	191
RAYNHAM	11,525	0	72	2	0	129
READING	23,953	0	96	1	0	64
REHOBOTH	10,188	0	20	1	0	122
REVERE	43,681	1	209	5	0	64
RICHMOND	1,740	1	5	0	0	93
ROCHESTER	4,623	0	6	0	0	29
ROCKLAND	17,608	1	86	2	0	25
ROCKPORT	8,043	0	40	0	0	99
ROME	371	0	1	0	0	-20
ROWLEY	5,434	0	35	1	0	1
ROYALSTON	1,205	0	2	0	0	9
RUSSELL	1,734	0	0	0	0	-2
						10

- (1) MISER POPULATION ESTIMATES FOR MASSACHUSETTS CITIES AND TOWNS: JULY 1, 1999. POPULATION PROGRAM, MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH, UNIVERSITY OF MASSACHUSETTS AT AMHERST.
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TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1999

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE :	RESIDENT :	OCCURRENCE :	RESIDENT :	TOTAL :	NEONATAL (2)	LICENSES: OCCURRENCE ISSUED : (3)	(4)	
STATE TOTAL	6,332,530	81,765	80,866	56,596	55,763	418	332	39,410	39,410	25,103
RUTLAND	6,123	0	86	17	37	0	0	0	25	49
SALEM	40,348	1,737	504	631	367	2	1	0	307	137
SALISBURY	7,554	0	90	16	61	1	1	0	43	29
SANDSFIELD	801	0	7	5	8	0	0	0	2	-1
SANDWICH	19,908	1	211	75	126	0	0	0	125	85
SAUGUS	25,898	0	253	128	302	0	0	0	162	-49
SAVOY	697	0	7	1	4	0	0	0	1	3
SCITUATE	17,380	1	248	95	173	3	3	0	187	75
SEEKONK	13,789	1	125	32	112	2	1	0	91	13
SHARON	17,276	0	180	41	89	1	0	0	90	91
SHEFFIELD	3,347	0	28	11	34	0	0	0	37	-6
SHELBURNE	2,178	1	13	20	21	0	0	0	21	-8
SHERBORN	4,284	0	58	6	20	0	0	0	55	38
SHIRLEY	7,143	0	76	8	38	1	1	0	39	38
SHREWSBURY	30,390	0	464	107	232	1	1	0	94	232
SHUTESBURY	1,954	2	18	1	5	0	0	0	2	13
SOMERSET	18,067	1	134	82	194	0	0	0	78	-60
SOMERVILLE	77,838	4	949	247	564	4	4	0	320	385
SOUTH HADLEY	17,678	0	132	72	163	0	0	0	113	-31
SOUTH HAMPTON	5,321	0	47	7	34	0	0	0	11	13
SOUTHBOROUGH	8,419	0	147	10	41	0	0	0	55	106
SOUTHBRIDGE	17,489	433	219	211	192	4	4	0	104	27
SOUTHWICK	8,885	1	89	18	61	0	0	0	53	28
SPENCER	11,907	0	154	32	98	2	2	0	102	56
SPRINGFIELD	151,292	5,721	2,383	2,225	1,469	21	13	0	921	914
STERLING	7,416	0	83	6	41	1	1	0	81	42
STOCKBRIDGE	2,315	2	12	2	26	0	0	0	54	-14
STONEHAM	22,020	127	267	102	235	0	0	0	91	32
STOUGHTON	28,133	1	315	321	241	1	1	0	107	74
STOW	5,715	0	95	4	21	1	1	0	25	74
STURBRIDGE	8,082	3	91	14	60	1	1	0	132	31
SUDBURY	16,260	1	263	94	86	0	0	0	294	177

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TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1999

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE :	RESIDENT :	OCCURRENCE :	RESIDENT :	TOTAL :	NEONATAL (2)	ISSUED :	OCCURRENCE (3)	
STATE TOTAL	6,332,530	81,765	80,866	56,596	55,763	418	332	39,410	39,410	25,103
SUNDERLAND	3,792	2	30	27	16	0	0	0	13	14
SUTTON	8,153	0	86	9	43	0	0	0	0	49
SWAMPSCOTT	14,704	0	181	102	172	0	0	0	0	43
SWANSEA	16,079	0	139	40	112	3	3	0	75	9
TAUNTON	55,183	687	795	548	515	6	3	0	106	27
TEMPLETON	6,955	0	76	51	72	0	0	0	348	280
TEWKSBURY	29,603	0	393	156	230	3	1	0	37	4
TISBURY	3,674	0	41	12	49	0	0	0	129	163
TOLLAND	396	0	3	1	2	0	0	0	42	-8
TOPSFIELD	6,330	0	55	31	40	0	0	0	0	1
TOWNSEND	9,424	0	109	11	43	0	0	0	31	15
TRURO	1,960	0	9	14	22	0	0	0	33	66
TYNGSBOROUGH	10,716	0	176	19	66	0	0	0	29	-13
TYRINGHAM	391	0	0	1	3	0	0	0	39	110
UPTON	5,540	0	112	13	39	0	0	0	0	-3
UXBRIDGE	11,752	0	182	20	60	0	0	0	25	73
WAKEFIELD	25,045	0	334	204	233	0	0	0	101	122
MALES	1,759	0	23	6	13	0	0	0	136	101
WALPOLE	23,085	0	278	91	180	1	1	0	4	10
WALTHAM	59,243	404	681	439	485	4	3	0	98	98
WARE	9,820	226	108	81	93	0	0	0	384	196
WAREHAM	20,575	498	235	289	242	2	0	0	53	15
WARREN	4,815	1	45	7	33	0	0	0	143	-7
WARMICK	778	0	10	2	8	0	0	0	12	12
WASHINGTON	572	0	1	5	3	0	0	0	4	2
WATERTOWN	32,399	0	371	125	293	1	0	0	15	-2
WAYLAND	13,128	1	150	48	89	0	0	0	188	78
WEBSTER	16,313	0	207	224	171	1	1	0	47	61
WELLESLEY	27,716	85	340	129	219	2	2	0	105	36
WELLFLEET	2,687	1	20	16	27	0	0	0	98	121
WENDELL	1,062	0	6	0	1	0	0	0	59	-7
MENHAM	5,014	0	38	6	34	0	0	0	2	5
									13	4

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TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1999

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE :	RESIDENT :	OCCURRENCE :	RESIDENT :	TOTAL :	NEONATAL (2)	LICENSES : ISSUED :	OCCURRENCE (3) :	
STATE TOTAL	6,332,530	81,765	80,866	56,596	55,763	418	332	39,410	39,410	25,103
WEST BOYLSTON	7,508	0	64	44	74	1	0	0	82	-10
WEST BRIDGEWATER	6,760	0	77	85	65	0	0	0	51	12
WEST BROOKFIELD	3,683	0	43	49	40	0	0	0	61	3
WEST NEWBURY	4,027	0	50	6	13	0	0	0	13	37
WEST SPRINGFIELD	28,425	1	330	206	303	1	1	0	188	27
WEST STOCKBRIDGE	1,447	0	10	2	15	0	0	0	20	-5
WEST TISBURY	2,338	1	20	3	6	0	0	0	49	14
WESTBOROUGH	17,320	1	213	164	159	1	0	0	107	54
WESTFIELD	40,511	3	437	371	356	2	2	0	273	81
WESTFORD	20,130	0	278	76	98	1	1	0	72	180
WESTHAMPTON	1,515	0	10	8	14	0	0	0	1	-4
WESTMINSTER	7,014	0	63	16	47	0	0	0	59	16
WESTON	11,316	1	117	87	105	0	0	0	105	12
WESTPORT	14,805	1	111	40	129	0	0	0	150	-18
WESTWOOD	14,015	1	202	50	158	1	1	0	46	44
WEYMOUTH	53,878	3,916	752	963	515	2	2	0	282	237
WHATELY	1,466	0	6	4	15	0	0	0	8	-9
WHITHAM	13,580	1	213	30	97	3	3	0	89	116
WILBRAHAM	13,478	1	118	120	114	0	0	0	82	4
WILLIAMSBURG	2,599	0	24	4	21	1	0	0	12	3
WILLIAMSTOWN	8,731	1	24	150	85	0	0	0	58	-61
WILMINGTON	20,839	1	330	159	154	1	1	0	92	176
WINCHENDON	9,532	0	126	15	62	0	0	0	64	79
WINCHESTER	20,892	2,416	271	459	192	0	0	0	131	6
WINDSOR	839	0	14	2	6	0	0	0	0	8
WINTHROP	17,750	0	196	116	214	1	1	0	106	-18
WOBURN	37,148	1	498	186	351	2	1	0	230	147
WORCESTER	170,915	6,029	2,473	3,168	1,845	20	16	0	1,229	628
WORTHINGTON	1,305	0	11	1	4	0	0	0	7	7
WRENTHAM	10,515	0	161	81	82	1	0	0	81	79
YARMOUTH	23,767	0	213	176	372	0	0	0	189	-159
UNKNOWN	0	3	2	0	0	0	0	0	0	2

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TABLE A-4B  
VITAL EVENTS BY COUNTY  
1999

COUNTY	POPULATION (1)	LIVE BIRTHS OCCURRENCE: RESIDENT :	DEATHS OCCURRENCE: RESIDENT :	INFANT DEATHS TOTAL : NEONATAL (2)	MARRIAGES (3)	DIVORCES (3)	RESIDENT NATURAL INCREASE
STATE TOTAL	6,291,263	81,765 : 80,866	56,596 : 55,763	418 : 332	39,410	15,632	25,103
BARNSTABLE	205,920	1,604	2,579	9	2,454	579	-680
BERKSHIRE	138,938	1,327	1,692	1	986	444	-327
BRISTOL	528,904	4,865	4,661	46	3,145	1,432	1,587
BUKES	14,272	122	105	0	489	63	36
ESSEX	715,669	8,487	6,121	43	4,625	1,831	3,319
FRANKLIN	71,615	546	572	3	468	287	36
HAMPDEN	454,635	6,216	5,020	36	2,809	1,379	1,003
HAMPSHIRE	158,777	1,117	987	5	810	305	77
MIDDLESEX	1,464,685	17,457	10,869	81	8,046	2,753	7,591
NANTUCKET	7,705	89	60	4	320	43	45
NORFOLK	657,683	4,635	5,024	31	3,455	1,478	2,676
PLYMOUTH	470,158	3,693	3,331	38	2,738	1,396	2,735
SUFFOLK	649,733	22,579	8,656	65	4,498	1,430	3,935
WORCESTER	752,569	9,028	6,919	56	4,567	2,212	3,070
UNKNOWN	0	0	0	0	0	0	0

(1) MISER POPULATION ESTIMATES FOR MASSACHUSETTS COUNTIES: JULY 1, 1999. POPULATION PROGRAM, MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH, UNIVERSITY OF MASSACHUSETTS AT AMHERST.

(2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.

(3) MARRIAGE AND DIVORCE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

## BIRTHS



## SECTION B

### BIRTHS

There were 80,866 live births to Massachusetts residents in 1999, a 0.7% decrease from the 81,406 resident live births in 1998. Live births to Massachusetts residents include all births to Massachusetts residents, regardless of the state in which the births occurred. Most data presented in this section are resident data. Table B-13 presents births by licensed maternity facility of occurrence, which includes births to women who live in other states.

#### OCCURRENCE BIRTHS

In 1999, 81,765 births occurred in Massachusetts. All but 283 births occurred at the 55 licensed maternity facilities in this state. The number of babies delivered at these maternity facilities ranged from 61 at Cambridge Birth Center in Cambridge to 9,787 at Brigham and Women's Hospital in Boston. The four hospitals with the greatest numbers of births were Brigham and Women's Hospital (9,787), Beth Israel Deaconess Medical Center (5,085), Baystate Medical Center (4,910) and UMASS Memorial Medical Center - West Campus in Worcester (4,053) and they represented 29.2% of all births occurring in Massachusetts. The distribution of Massachusetts births by hospital size is presented below.

1999 -DISTRIBUTION OF MASSACHUSETTS  
OCCURRENCE BIRTHS BY HOSPITAL

NUMBER OF BIRTHS AT HOSPITAL	NUMBER OF HOSPITALS IN CATEGORY	TOTAL NUMBER OF BIRTHS IN CATEGORY	% OF TOTAL BIRTHS
< 500	14	3,432	4.2
500-999	14	10,144	12.4
1000-1499	8	10,334	12.6
1500-1999	7	11,733	14.3
≥ 2000	12	45,839	56.1
All Other <sup>1</sup>		283	.3
TOTAL	55	81,765	100.0 <sup>2</sup>

<sup>1</sup> Includes hospitals without maternity units, home births, births en route to hospital and births occurring in a doctor's office/clinic.

<sup>2</sup> Percents do not sum to 100.0 due to rounding.

## BIRTHS BY RACE/ETHNICITY

There are two points to keep in mind when analyzing 1999 data by race/ethnicity. First, since June 1986, information on both race and ethnicity rather than just race has been collected. This provides improved data, particularly for Hispanic births. Presented for comparison below are resident birth data for calendar years 1998 and 1999, utilizing maternal race and Hispanic ethnicity information:

### RACE AND HISPANIC ETHNICITY OF MOTHER 1998 - 1999

MATERNAL RACE/ETHNICITY	1999		1998		CHANGE (1998-1999)
	TOTAL BIRTHS	% OF BIRTHS	TOTAL BIRTHS	% OF BIRTHS	
White non-Hispanic	60,402	74.7	61,765	75.9	-1,363
Black non-Hispanic	5,844	7.2	5,549	6.8	295
Hispanic	8,815	10.9	8,665	10.6	150
Asian	4,138	5.1	3,748	4.6	390
Other <sup>3</sup>	1,477	1.8	1,530	1.9	-53
Unknown <sup>4</sup>	190	0.2	149	0.2	41
<b>TOTAL</b>	<b>80,866</b>	<b>100</b>	<b>81,406</b>	<b>100</b>	<b>-540</b>

<sup>3</sup> Other races include American Indian, Hawaiian, and Other.

<sup>4</sup> Unknown race: mothers did not indicate a race/ethnicity.

<sup>5</sup> Percents do not sum to 100.0 due to rounding.

The other point which must be considered is the method used to present data by race/ethnicity. Massachusetts follows the recommendation from the National Center for Health Statistics (NCHS) for classifying race/ethnicity on the birth certificate according to the self-reported race/ethnicity of the mother. Beginning with 1989 births, birth data are presented by race/ethnicity of the mother only.

## TEEN BIRTHS

The number of births to mothers aged 15-19 decreased from 5,823 in 1998 to 5,515 in 1999. The teen birth rate also decreased with the rate going from 28.1 in 1998 to the 1999 rate of 26.6 births per 1,000 women aged 15-19. The percentage of total births to women under age 20 continues to decrease markedly, from a peak of 12.7% in 1975 to 6.9% in 1999.

## BIRTHS BY MARITAL STATUS

The percentage of births to unmarried women increased from 26.0% of all resident births in 1998 to 26.5% of all resident births in 1999. Over 90% of mothers under the age of 20 were unmarried while 21.7% of the mothers whose ages were 20 or older were unmarried.

## BIRTHS BY AGE OF MOTHER

The largest percentage increases in births between the years 1998 and 1999 (6.2%) were to mothers in the 40-44 age group, as shown below. This percentage is based on relatively few births and should be interpreted with caution.

AGE OF MOTHER	NUMBER OF BIRTHS 1999	NUMBER OF BIRTHS 1998	DIFFERENCE IN THE NUMBER OF BIRTHS 1998-1999	PERCENTAGE CHANGE 1997-1998
< 20	5,588	5,902	-314	-5.3
20-24	11,813	11,819	-6	-.05
25-29	20,382	20,936	-554	-2.6
30-34	26,330	26,425	-95	.4
35-39	13,973	13,701	272	2.0
40-44	2,656	2,501	155	6.2
≥ 45	124	119	5	4.2

## BIRTHS BY CAESAREAN SECTION

The number of Caesarean section deliveries in Massachusetts increased from 17,190 in 1998 to 18,080 in 1999, an increase of about 5.2%. Caesarean section was the method of delivery for 22.6% of the 1999 occurrence births, compared to the 21.0% of Caesarean section deliveries in 1998. (Calculations are based on births with known method of delivery.)

## HOSPITAL PROFILES

The following table is a synopsis of hospital data some of which is presented in Table B-13, Occurrence and Caesarean Births by Licensed Maternity Facility:

- In 1999, 80,866 births occurred in Massachusetts, a decrease of 13.0% since 1990. Caesarean section was the method of delivery for 22.6% of 1999 births. (Calculations are based on births with known method of delivery.)
- In 1999, seven hospitals had a low birthweight occurrence of at least 10%. These hospitals were: Baystate Medical Center, Beth Israel Deaconess Medical Center, Boston Medical Center, Brigham and Women's Hospital, New England Medical Center, St. Elizabeth's Medical Center of Boston, and UMass Memorial Medical Center West Campus.
- In four hospitals, 50% or more of the deliveries were paid with public funds: Boston Medical Center (86.8%), Lawrence General Hospital (61.1%), Mercy Hospital (52.1%), and St. Luke's Hospital (51.5%). In eight facilities, less than 10% of deliveries were paid with public funds: Boston Regional Medical Center, Emerson Hospital, Mount Auburn Hospital, Newton-Wellesley Hospital, North Shore Birth Center, South Shore Hospital, The Birthplace At Wellesley, and Winchester Hospital.
- In 1999, 27 of the 55 licensed maternity facilities exceeded the state-wide average (79.3%) for adequacy of prenatal care for their patients. The four maternity facilities with the lowest reported rate of women who had received adequate prenatal care were: Boston Medical Center (50.8%), Lawrence General Hospital (56.3%), Cambridge Birth Center (60.0%), and Cambridge Hospital (60.0%).
- Statewide, the lowest rates of Caesarean section deliveries were at the following licensed maternity facilities: Heywood Hospital (15.4%), Hale Hospital (17.0%), St. Vincent's Hospital (17.2%), Lawrence General Hospital (17.6%), Franklin Medical Center (17.9%), and Tobey Hospital (18.1%).
- In 1999, the Caesarean section rate was less than 30% for the sixth consecutive year. Ten hospitals had Caesarean section delivery rates of 25% or more (Beth Israel Deaconess Medical Center, Brigham and Women's Hospital, Boston Regional Medical Center, Fairview Hospital, Holy Family Hospital and Medical Center, Morton Hospital, Nantucket Cottage Hospital, New England Medical Center Hospital, Saints Memorial Medical Center- St. John's Campus, and St. Elizabeth's Medical Center of Boston).

## LOW BIRTHWEIGHT INFANTS

The percentage of low birthweight infants (less than 2,500 grams or five pounds eight ounces) increased slightly from 6.9% in 1998 to 7.1% in 1999. The number of low birthweight deliveries increased from 5,484 births in 1998 to 5,708 births in 1999.



## COMMUNITY HEALTH NETWORK AREAS (CHNA)

The Department of Public Health, in collaboration with health service providers, coalition members, and other interested citizens, has designated 27 geographic areas for community health planning. It is the Department's intention to foster in each of these areas the development of Community Health Networks a consortia of health care providers, human service agencies, schools, churches, youth, parents, elders, advocacy groups, and individual consumers to address the health needs of the community. These community coalitions will participate in monitoring outcomes and the progress of strategies and responses to those health needs. The data published in this edition reflect the new definitions of CHNAs instituted in January 1997.

A Community Health Network Area (CHNA) is defined as an aggregation of cities and towns. (The city of Boston constitutes its own Community Health Network Area.) It is hoped that the networks will mobilize around key health issues impacting the community, promote prevention efforts, enhance access to health care, provide opportunities for more collaboration among agencies, and create a client-centered, outcome-oriented health service delivery system. Community Health Networks will also promote efficiency in service delivery by working to reduce duplication and overlap, and by identifying gaps in service.

DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:

### ADEQUACY OF PRENATAL CARE

The Index of Adequacy of Prenatal Care (based on the Kessner Index) has five categories (adequate, intermediate, inadequate, no prenatal care, and unknown), based on the trimester in which prenatal care began and the number of prenatal visits. The general classification scheme is as follows:

<u>CATEGORY</u>	<u>TRIMESTER CARE BEGAN</u>	<u># OF VISITS</u>
Adequate	1	9 or more
Intermediate	1	5-8
	2	5 or more
Inadequate	1	1-4
	2	1-4
	3	1 or more
No prenatal care	--	0
Unknown	Unknown	Unknown

This classification is adjusted for gestational age to allow for proper classification of premature births.

## ANCESTRY

A self-reported item on the birth certificate, with listings and an open text field. The items listed are:

Puerto Rican	Dominican	Mexican	Cuban
Columbian	Salvadorian	Other Central Amer.	Other South Amer.
Other Hispanic	Chinese	Cambodian	Asian Indian
Korean	Filipino	Japanese	Laotian
Pakistani	Thai	Hawaiian	Other Asian/Pac. Isl.
Cape Verdean	Brazilian	Other Portuguese	Haitian
Jamaican	Barbadian	Other West Indian / Caribbean	
African-American	Nigerian	Other African	Lebanese
Iranian	Israeli	Other Mid. Eastern	Native American
European	Other		

## BIRTHWEIGHT

The weight of an infant recorded at the time of delivery. It may be recorded in either pounds/ounces or grams. If recorded in pounds/ounces, it is converted to grams for use in this report.

1 pound = 453.6 grams

1,000 grams = 2 pounds, 3 ounces

## BIRTHWEIGHT CATEGORIES

Normal birthweight (NBW)	An infant's weight of 2,500 grams (5.5 pounds) or more recorded at birth.
Low birthweight (LBW)	An infant's weight of less than 2,500 grams (5.5 pounds) recorded at birth.
Very low birthweight (VLBW)	An infant's weight of less than 1,500 grams (3.3 pounds) recorded at birth.

## CAESAREAN SECTION or C-SECTION

Primary: A mother's first Caesarean section delivery.

Repeat: A Caesarean delivery that has been preceded by at least one Caesarean delivery.

## ETHNICITY

See Race.

## FOREIGN-BORN WOMEN

Women not born in the United States, its possessions or protectorates. Women born in Puerto Rico, the US Virgin Islands, and Guam are not foreign-born.

## HEALTHY START

A Massachusetts-funded program providing services and financing for prenatal care to low-income pregnant women who lack health insurance, but do not qualify for Medicaid.

## INFANT

A child whose age is less than one year (365 days).

## LIVE BIRTH

A live birth is any infant who breathes or shows any other evidence of life (such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles) after separation from the mother's uterus, regardless of the duration of gestation.

## LOW BIRTHWEIGHT (LBW)

See Birthweight Categories.

## NEONATAL

Referring to a child under 28 days of age.

## NORMAL BIRTHWEIGHT (NBW)

See Birthweight Categories.

## OCCURRENCE BIRTH

A birth occurring in the Commonwealth of Massachusetts, regardless of the residency of the mother. In Massachusetts, the place will be one of the 351 cities or towns. See Resident Birth.

## PARITY

Total number of live births, including the present birth, ever born to the mother.

## PLURALITY

The number of births to a woman produced in the same gestational period. A singleton is the birth of one infant, twins represent the births of two infants, etc.

## POST NEONATAL

Referring to a child whose age is at least 28 days, but less than one year.

### PRIMARY CAESAREAN SECTION or C-SECTION

See Caesarean Section.

### RACE

Race of mother: For data presented in this publication, mother's race is as reported by the infant's mother. The tables that use race or ethnicity in this document all refer to the mother's race or ethnicity.

Ethnicity: Beginning in 1986, an identifier for Hispanic and other ethnicities was added to the birth certificate. Prior to this change, most Hispanics were included with whites and it was not possible to accurately calculate Hispanic-specific rates of natality.

### REPEAT CAESAREAN SECTION or C-SECTION

See Caesarean Section.

### RESIDENT BIRTH

The birth of an infant whose mother reports that her usual place of residence is in Massachusetts. In Massachusetts, a resident is a person with a permanent address in one of the 351 cities or towns. Vital statistics data may be presented in terms either of residence or occurrence. Unless otherwise noted, all data in this publication are resident data. Resident data include all events that occur to residents of the Commonwealth, wherever they occur. Occurrence data include all events that occur within the state, whether to residents or non-residents. There is an exchange agreement among the 50 states, Canada, Puerto Rico, Guam, the Virgin Islands, and the District of Columbia that provides for exchange of copies of birth and death records. These records are used for statistical purposes only, and allow each state or province to track the births and deaths of its residents.

### VAGINAL BIRTH AFTER CAESAREAN (VBAC)

A vaginal delivery of an infant to a mother who had had at least one prior Caesarean section delivery.

### VERY LOW BIRTHWEIGHT (VLBW)

See Birthweight Categories.

**RATES IMPORTANT FOR THIS SECTION INCLUDE:**

**AGE-SPECIFIC BIRTH RATE**       $\frac{\text{No. of Resident Live Births for a Specific Age Group of Mothers}}{\text{Total Female Population of That Specific Age Group}} \times 1,000$

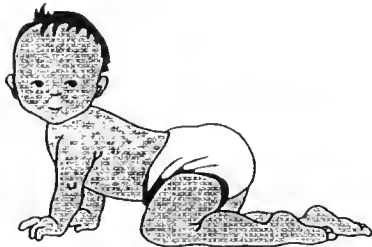
**CRUDE BIRTH RATE**       $\frac{\text{No. of Resident Live Births}}{\text{Total Resident Population}} \times 1,000$

**GENERAL FERTILITY RATE**       $\frac{\text{No. of Resident Live Births}}{\text{Total Female Population of Childbearing Age (15-44)}} \times 1,000$

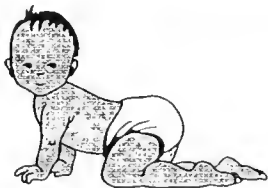
**CAESAREAN SECTION or C-SECTION RATE**       $\frac{\text{No. of Resident Births Delivered by C-Section}}{\text{Total Number of Resident Births}} \times 100$

**Figure B-1. Daily Birth Statistics, Massachusetts: 1999**

Every day in 1999, residents of Massachusetts experienced an average of:



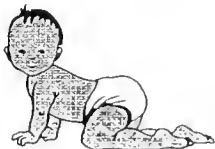
222 Births



50 Births by Caesarean Section



46 Births to women aged 35 or older



46 Births with less than adequate  
prenatal care



16 Births weighing less than 2500 grams  
or 5 lbs. 8 oz. (low birthweight)



15 Births to women aged 15 through 19

Table B-1. Trends in Birth Characteristics, Massachusetts: 1980, 1985, 1990-1999

Characteristic	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Births<sup>1</sup></b>												
# <sup>2</sup>	72,591	81,781	92,461	88,176	87,202	84,627	83,758	81,562	80,164	80,321	81,406	80,866
Rate <sup>3</sup>	53.4	57.5	62.1	59.4	59.1	57.6	57.0	55.5	54.6	54.7	55.6	55.2
<b>Race of Mother</b>												
White <sup>4</sup>												
#	66,220	71,854	80,775	76,983	76,052	73,704	72,980	71,083	69,485	69,503	70,452	69,305
%	91.2	87.9	87.4	87.3	87.2	87.1	87.1	87.2	86.7	86.5	86.5	85.7
Black												
#	4,626	5,099	7,729	7,352	7,203	6,916	6,713	6,299	5,946	6,182	6,337	6,524
%	6.4	6.2	8.3	8.3	8.3	8.2	8.0	7.7	7.4	7.7	7.8	8.1
Asian/Other <sup>5</sup>												
#	1,069	1,741	3,688	3,566	3,582	3,664	3,790	3,817	3,950	4,217	4,248	4,615
%	1.5	2.1	4.0	4.0	4.1	4.3	4.5	4.7	4.9	5.3	5.2	5.7
Unknown												
#	676	3,087	269	275	365	343	275	363	783	419	369	422
%	0.9	3.8	0.3	0.3	0.4	0.4	0.3	0.4	1.0	0.5	0.5	0.5
<b>Teen Births (Ages 15-19)</b>												
#	7,694	6,859	7,258	6,892	6,555	6,469	6,412	5,990	5,758	5,801	5,823	5,515
Rate <sup>3</sup>	28.1	28.7	35.4	35.4	34.5	34.0	33.2	30.3	28.5	28.5	28.1	26.6
<b>Births to Unmarried Mothers</b>												
#	11,356	15,044	22,837	22,852	22,612	22,345	22,302	20,857	20,253	20,640	21,191	21,448
%	15.6	18.4	24.7	25.9	25.9	26.4	26.6	25.6	25.3	25.7	26.0	26.5
<b>Low Birthweight</b>												
#	4,413	4,751	5,388	5,199	5,137	5,202	5,335	5,174	5,105	5,617	5,655	5,708
%	6.1	5.8	5.8	5.9	5.9	6.2	6.4	6.4	6.4	7.0	7.0	7.1
<b>Adequate Prenatal Care<sup>6</sup></b>												
%	82.0	79.4	80.1	81.6	82.9	83.8	84.3	84.2	79.9	80.0	79.8	79.4
%	79.6	78.6	78.8	81.2	82.7	83.6	84.1	83.6	75.7	79.0	79.4	78.8

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.  
 1. Births presented in all tables are resident live births unless otherwise specified. 2. Differences in numbers of births from previous publications are the result of updated files.  
 3. Birth rates represent the total number of births to women ages 15-44 years per 1,000 females ages 15-44; teen birth rates refer to number of births per 1,000 women age 15-19. 1999 birth rates are calculated using the 1998 MISCER population estimates (released in September 2000). PLEASE NOTE: DIFFERENCES BETWEEN THESE RATES AND PREVIOUSLY PUBLISHED DATA REFLECT UPDATES IN POPULATION ESTIMATES. \* On tables and graphs that include data prior to June 1996, the race classifications do not include an ethnicity component; most Hispanics are included in the race category of white. \* Other races include American Indian and others not specified.  
 \* Percentages in upper row are based on births with known scores of adequacy of prenatal care; bottom row percentages are based on total numbers of births. In subsequent tables and figures, percentage with adequate prenatal care is computed only on births with known adequacy scores. Adequacy of prenatal care has been recalculated for 1996, 1997, 1998 and 1999, which reflects computational adjustments to make Massachusetts data more comparable to the calculations recommended by the National Center for Health Statistics.

Table B-2A. Birth Characteristics by Maternal Race/Hispanic Ethnicity, Massachusetts: 1999

Race and Hispanic Ethnicity (by mother's birthplace)	Births <sup>1</sup>		Teen Births				Birthweight				Prenatal Care				Cesarean Section		Breast Feeding <sup>4</sup>	
	#	%	<18 Years #	%	<20 Years #	%	Very Low <sup>2</sup> #	%	Low <sup>3</sup> #	%	Adequate #	%	First Trimester #	%	#	%	#	%
State Total	80,866	100.0	1,926	2.4	5,588	6.9	1,120	1.4	5,708	7.1	63,728	79.4	67,732	84.3	18,080	22.4	57,394	72.4
U.S. States / D.C.	62,857	77.7	1,445	2.3	4,248	6.8	854	1.4	4,348	6.9	51,028	81.8	54,160	86.7	14,192	22.6	42,858	69.8
Puerto Rico/U.S. Terr. <sup>6</sup>	2,255	2.8	263	11.7	550	24.4	41	1.8	216	9.6	1,462	65.3	1,600	71.4	430	19.1	1,499	66.8
Non-U.S.-Born <sup>7</sup>	15,754	19.5	218	1.4	790	5.0	225	1.4	1,144	7.3	11,238	71.8	11,972	76.4	3,458	22.0	13,037	83.5
Non-Hispanic White	60,402	74.7	786	1.3	2,686	4.4	704	1.2	3,833	6.4	49,903	83.1	52,845	87.9	13,762	22.8	42,416	71.9
U.S. States / D.C.	55,443	91.8	761	1.4	2,567	4.6	652	1.2	3,546	6.4	46,055	83.5	48,793	88.4	12,695	22.9	38,332	70.8
Puerto Rico/U.S. Terr. <sup>6</sup>	41	0.1	0	0.0	1	-- <sup>5</sup>	3	-- <sup>5</sup>	6	14.6	33	82.5	36	90.0	15	36.6	25	75.8
Non-U.S.-Born <sup>7</sup>	4,918	8.1	25	0.5	118	2.4	49	1.0	281	5.7	3,815	78.0	4,016	82.0	1,052	21.4	4,059	84.1
Non-Hispanic Black	5,844	7.2	268	4.6	719	12.3	210	3.6	712	12.2	3,990	68.7	4,263	73.2	1,410	24.2	4,125	71.0
U.S. States / D.C.	3,390	58.0	241	7.1	607	17.9	133	3.9	454	13.4	2,298	68.1	2,461	72.9	727	21.5	2,027	60.3
Puerto Rico/U.S. Terr. <sup>6</sup>	14	0.2	0	0.0	1	-- <sup>5</sup>	1	-- <sup>5</sup>	1	-- <sup>5</sup>	11	84.6	11	84.6	1	-- <sup>5</sup>	12	85.7
Non-U.S.-Born <sup>7</sup>	2,440	41.8	27	1.1	111	4.5	76	3.1	257	10.5	1,681	69.3	1,791	73.7	682	28.0	2,086	85.7
Hispanic	8,815	10.9	709	8.0	1,746	19.8	136	1.5	721	8.2	5,831	66.5	6,324	72.0	1,783	20.3	6,600	75.0
U.S. States / D.C.	2,885	32.7	353	12.2	867	30.1	52	1.8	256	8.9	1,948	67.9	2,135	74.4	550	19.1	1,827	63.5
Puerto Rico/U.S. Terr. <sup>6</sup>	2,189	24.8	261	11.9	546	24.9	36	1.6	207	9.5	1,410	64.8	1,544	70.9	413	18.9	1,454	66.5
Non-U.S.-Born <sup>7</sup>	3,741	42.4	95	2.5	333	8.9	48	1.3	258	6.9	2,473	66.3	2,645	70.9	820	22.0	3,319	88.8
Asian	4,138	5.1	86	2.1	215	5.2	44	1.1	301	7.3	2,993	72.8	3,200	77.8	778	18.8	3,128	76.0
U.S. States / D.C.	334	8.1	37	11.1	54	16.2	5	1.5	28	8.4	246	73.9	260	78.1	63	18.9	267	80.7
Puerto Rico/U.S. Terr. <sup>6</sup>	4	-- <sup>5</sup>	0	0.0	0	0.0	0	0.0	0	0.0	3	-- <sup>5</sup>	3	-- <sup>5</sup>	0	0.0	3	-- <sup>5</sup>
Non-U.S.-Born <sup>7</sup>	3,800	91.8	49	1.3	161	4.2	39	1.0	273	7.2	2,744	72.7	2,937	77.7	715	18.8	2,858	75.6
Other <sup>8</sup>	1,477	1.8	75	5.1	218	14.8	25	1.7	137	9.3	967	65.8	1,050	71.3	328	22.2	1,082	73.5
U.S. States / D.C.	645	43.7	51	7.9	149	23.1	11	1.7	61	9.5	443	69.1	468	72.8	141	21.9	371	57.7
Puerto Rico/U.S. Terr. <sup>6</sup>	6	0.4	2	-- <sup>5</sup>	2	-- <sup>5</sup>	1	-- <sup>5</sup>	2	-- <sup>5</sup>	4	-- <sup>5</sup>	5	83.3	1	-- <sup>5</sup>	4	-- <sup>5</sup>
Non-U.S.-Born <sup>7</sup>	826	55.9	22	2.7	67	8.1	13	1.6	74	9.0	520	63.2	577	70.0	186	22.5	707	85.9
Unknown <sup>9</sup>	190	0.2	2	-- <sup>5</sup>	4	-- <sup>5</sup>	1	-- <sup>5</sup>	4	5.1	44	62.9	50	71.4	19	17.9	43	67.2

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. In the first category, "Births", percentages are based on column totals, percentages of mother's birthplace categories are based on subtotals of each race/Hispanic ethnicity category. For all other categories, percentages are based on row totals. 2. Very/low birthweight: less than 1,500 grams or 3.3 pounds. 3. Low birthweight: less than 2,500 grams or 5.5 pounds. 4. Mother was breastfeeding or was intending to breastfeed at the time the birth certificate was completed. 5. Calculations based on fewer than five events are excluded. 6. The category "Puerto Rico/U.S. Territories" includes women born in Puerto Rico, the U.S. Virgin Islands, and Guam. In 1999, 96.4% of the births in this category were to women born in Puerto Rico. 7. The category "Non-U.S.-Born" includes women born outside of the 50 U.S. states, District of Columbia, and Puerto Rico/U.S. territories. 8. Other: Mothers who designated themselves as Other race. 9. Unknown: Mothers who did not indicate a race/ethnicity.



Table B-2B. Birth Characteristics by Major Maternal Ancestries, Massachusetts: 1999

Maternal Ancestry	Births <sup>1</sup>			Teen Births						Birthweight						Prenatal Care				Cesarean Section				Breast Feeding <sup>4</sup>			
	#		% <sup>5</sup>	<18 Years		% #		<20 Years		% #		Very Low <sup>2</sup>		Low <sup>3</sup>		Adequate		1st Trimester		#		% #		#		% #	
State Total	80,866	100.0	1,926	2.4	5,588	6.9	1,120	1.4	5,708	7.1	63,728	79.4	67,732	84.3	18,080	22.4	57,394	72.4									
Puerto Rican	4,418	5.5	545	12.3	1,238	28.0	77	1.7	395	8.9	2,862	65.2	3,155	71.8	817	18.5	2,792	63.3									
Dominican	1,555	1.9	73	4.7	215	13.8	22	1.4	116	7.5	1,023	66.0	1,119	72.1	371	24.0	1,351	87.1									
Salvadoran	658	0.8	18	2.7	79	12.0	7	1.1	42	6.4	386	58.8	413	62.9	96	14.6	593	90.1									
Other Central American	719	0.9	24	3.3	66	9.2	8	1.1	47	6.5	467	65.0	490	68.2	148	20.7	634	88.2									
Other Hispanic <sup>6</sup>	1,465	1.8	49	3.3	148	10.1	22	1.5	121	8.3	1,093	75.0	1,147	78.7	351	24.0	1,230	84.2									
Chinese	1,179	1.5	1	-- <sup>5</sup>	10	0.8	9	0.8	69	5.9	947	80.7	980	83.4	247	20.9	937	79.7									
Vietnamese	683	0.8	13	1.9	44	6.4	6	0.9	45	6.6	469	69.1	510	75.1	125	18.3	384	56.2									
Cambodian	557	0.7	52	9.3	118	21.2	3	-- <sup>5</sup>	42	7.6	258	46.7	315	57.0	59	10.6	277	49.7									
Asian Indian	717	0.9	0	0.0	4	-- <sup>5</sup>	10	1.4	70	9.8	560	79.0	596	84.1	173	24.2	678	95.4									
Other Asian/Pi <sup>7</sup>	1,092	1.4	20	1.8	46	4.2	20	1.8	93	8.5	826	75.8	867	79.5	192	17.6	930	85.5									
Cape Verdean	783	1.0	45	5.7	128	16.3	9	1.2	64	8.2	493	63.2	525	67.2	162	20.7	531	68.1									
Brazilian	799	1.0	14	1.8	46	5.8	6	0.8	54	6.8	579	72.6	616	77.3	249	31.2	735	92.0									
Other Portuguese	1,353	1.7	43	3.2	125	9.2	10	0.7	68	5.0	1,048	77.8	1,099	81.5	286	21.2	650	48.1									
Haitian	1,017	1.3	7	0.7	53	5.2	19	1.9	100	9.8	698	69.1	742	73.2	293	28.8	871	85.7									
W. Indian /Carib. <sup>8</sup>	663	0.8	23	3.5	59	8.9	27	4.1	78	11.8	481	72.7	511	77.2	157	23.8	559	84.3									
African-American	2,885	3.6	207	7.2	527	18.3	110	3.8	378	13.1	1,971	68.7	2,106	73.4	624	21.7	1,736	60.3									
African <sup>9</sup>	820	1.0	6	0.7	16	2.0	28	3.4	78	9.5	528	64.8	573	70.0	228	27.9	711	86.7									
Middle Easterner <sup>10</sup>	790	1.0	5	0.6	22	2.8	13	1.6	50	6.3	603	76.4	647	82.0	163	20.7	695	88.0									
Native American	262	0.3	19	7.3	40	15.3	2	-- <sup>5</sup>	19	7.3	186	71.3	200	76.3	53	20.2	168	64.1									
European	14,543	18.0	82	0.6	319	2.2	130	0.9	813	5.6	12,084	83.6	12,715	87.9	3,337	23.0	11,698	81.3									

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. In the first category, "Births", percentages are based on column total (state total of births). For all other categories, percentages are based on row totals. 2. Very low birthweight: less than 1,500 grams or 3.3 pounds. 3. Low birthweight: less than 2,500 grams or 5.5 pounds. 4. Mother was breastfeeding or was intending to breastfeed at the time the birth certificate was completed. 5. Calculations based on fewer than five events are excluded. 6. Other Hispanic includes Mexican, Cuban, Colombian, and Other South American. 7. Other Asian and Pacific Islander includes Korean, Filipino, Japanese, Laotian, Thai, Pakistani and Hawaiian. 8. West Indian and Caribbean include Jamaican and Barbadian. 9. African includes Nigerian and other African. 10. Middle Easterner includes Lebanese, Iranian, and Israeli.

Figure B-2. Resident Live Births by Mother's Race/Ethnicity: 1999

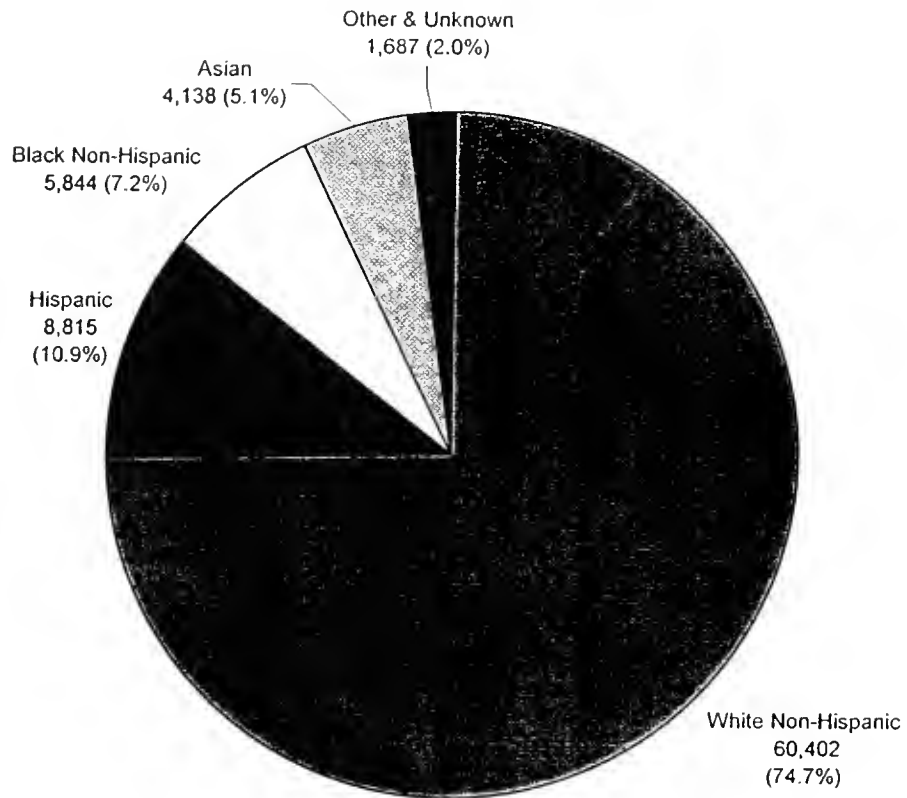


Figure B-3. Resident Live Briths by Mother's Age: 1999

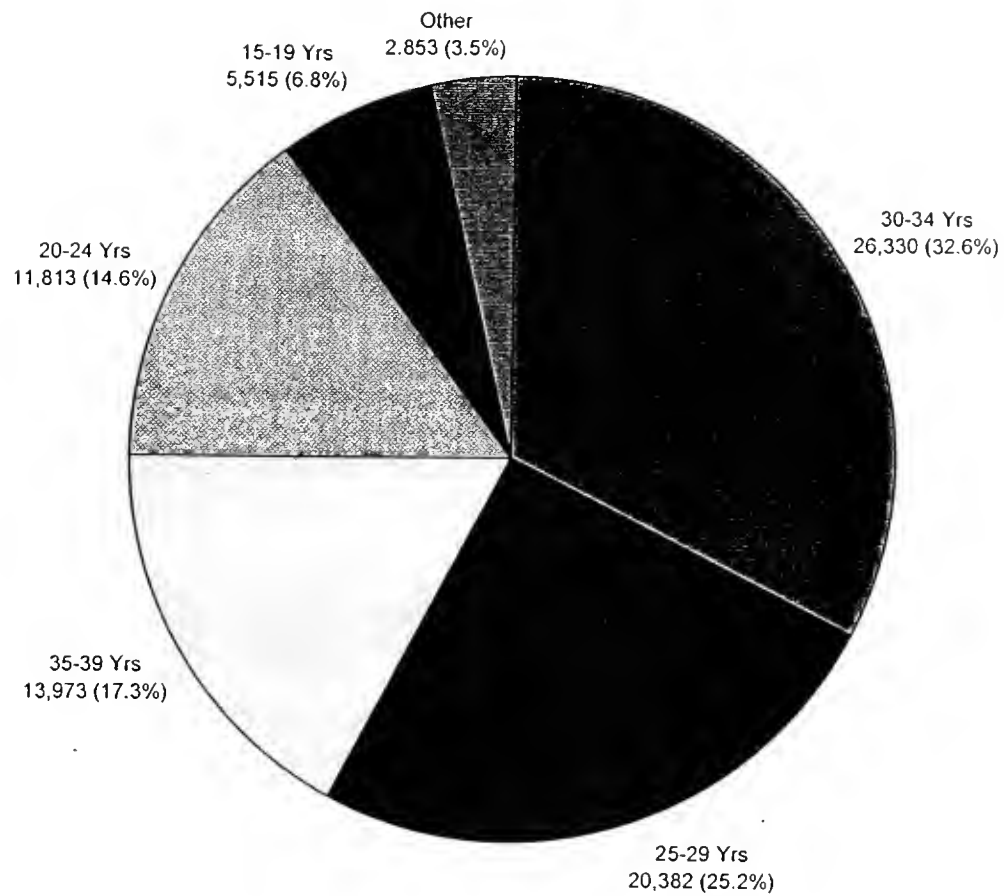


Table B-3A. Resident Birth Characteristics, 30 Largest Municipalities<sup>1</sup>, Massachusetts: 1999

Municipality	Rank	Population	Crude Birth Rate <sup>2</sup>	Mother's Race and Ethnicity				Asian or Other <sup>3</sup>		Very Low Birthweight (<1500 g)		Low Birthweight (<2500 g)	
				Non-Hispanic White %	Hispanic Black %	Non-Hispanic Black %	Hispanic %	%	%	%	%	%	%
STATE TOTAL		6,291,263	12.9	74.7		7.2	10.9		6.9	1.4		7.1	
Arlington	27	43,066	13.0	87.0		2.5	1.8		8.6	1.1		4.7	
Barnstable	26	46,461	10.3	85.0		4.4	2.7		7.9	1.5		8.2	
Boston	1	563,876	14.2	35.4		32.4	21.4		10.6	1.9		8.5	
Brockton	7	91,008	15.9	45.6		25.7	11.4		17.1	1.9		8.6	
Brookline	15	60,639	9.7	75.0		3.1	2.4		19.2	2.0		7.3	
Cambridge	5	96,292	11.0	59.0		15.5	8.7		16.8	1.6		8.0	
Chicopee	22	53,003	11.2	81.2		1.7	15.6		1.3	2.5		7.6	
Fall River	9	89,276	12.3	85.5		5.2	5.1		4.0	1.2		7.7	
Framingham	14	66,554	15.0	66.4		4.7	18.3		10.5	1.4		6.7	
Haverhill	18	57,186	16.1	82.6		2.5	12.8		2.0	0.7		8.4	
Holyoke	30	41,081	14.7	31.0		3.2	64.5		1.3	1.8		8.3	
Lawrence	13	70,325	20.1	22.8		2.3	70.5		4.2	1.3		8.3	
Leominster	29	41,875	13.7	69.4		5.9	18.3		6.3	1.2		8.6	
Lowell	4	106,449	15.7	48.7		4.7	18.8		27.7	2.3		8.5	
Lynn	11	83,464	16.6	45.6		12.5	30.4		11.4	1.4		8.9	
Malden	20	53,703	14.7	56.7		10.3	7.9		23.2	1.3		7.6	
Medford	17	57,983	11.0	78.8		2.0	3.9		6.1	1.3		6.6	
Methuen	28	42,050	12.8	78.4		6.6	16.2		3.4	1.9		7.8	
New Bedford	6	94,835	13.4	70.1		1.4	14.0		8.9	1.3		7.5	
Newton	8	90,506	9.7	84.8		0.9	3.7		10.2	0.8		6.4	
Peabody	24	50,979	11.0	87.0		0.9	6.6		5.3	1.8		8.9	
Pittsfield	25	46,691	10.5	86.8		6.9	1.2		5.1	—		6.5	
Plymouth	23	51,103	14.0	94.4		1.1	1.5		2.9	0.8		4.2	
Quincy	10	87,018	12.4	70.6		3.8	2.3		23.3	1.1		7.8	
Somerville	12	78,112	12.1	60.2		10.9	18.5		10.3	0.8		5.2	
Springfield	3	150,414	15.8	34.5		23.0	38.2		4.3	1.6		8.9	
Taunton	19	54,297	14.6	86.5		4.3	6.5		2.5	1.3		6.9	
Waltham	16	59,165	11.5	65.5		8.4	13.4		12.5	1.2		6.2	
Weymouth	21	53,670	14.0	91.2		2.0	1.9		4.9	0.9		7.6	
Worcester	2	169,091	14.6	56.3		9.9	24.7		9.1	2.2		9.1	

Table B-3A.(cont'd) Resident Birth Characteristics, 30 Largest Municipalities<sup>1</sup>, Massachusetts: 1999

Municipality	Birth				Deaths					
	Adequate Prenatal Care		Public Payment for Prenatal Care		Teen Mothers 15 to 19 years		Infant Mortality Rate <sup>4</sup>		Neonatal Mortality Rate <sup>4</sup>	
	%	%	%	#	Rate <sup>2</sup>	1999	1997-1999	1999	1997-1999	
STATE TOTAL	79.4	26.8	26.5	5,515	26.6	5.2	5.2	4.1	4.0	
Arlington	88.7	3.9	6.6	5	5.8	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	
Barnstable	80.5	34.9	27.6	27	21.1	-- <sup>5</sup>	8.8	-- <sup>5</sup>	4.7	
Boston	79.2	48.3	44.2	761	41.0	7.4	7.2	6.4	5.6	
Brockton	66.0	52.9	51.5	169	60.9	4.1	6.2	3.4	5.3	
Brookline	91.3	4.4	5.3	2	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	
Cambridge	82.5	16.3	20.4	44	14.5	-- <sup>5</sup>	2.9	-- <sup>5</sup>	1.6	
Chicopee	71.6	41.4	42.2	63	36.5	-- <sup>5</sup>	8.5	-- <sup>5</sup>	6.8	
Fall River	77.3	49.2	45.5	150	52.8	9.1	7.3	5.5	5.4	
Framingham	87.6	26.8	20.1	54	27.8	6.0	3.7	6.0	3.7	
Haverhill	81.3	27.4	31.4	82	49.6	-- <sup>5</sup>	5.3	-- <sup>5</sup>	3.8	
Holyoke	70.9	67.9	67.0	147	100.5	-- <sup>5</sup>	5.9	-- <sup>5</sup>	4.5	
Lawrence	54.4	67.2	62.3	277	103.9	5.7	9.2	5.0	7.3	
Leominster	78.3	27.2	30.1	60	52.1	-- <sup>5</sup>	4.5	-- <sup>5</sup>	3.9	
Lowell	60.5	48.9	48.9	235	62.9	8.4	5.9	5.4	4.2	
Lynn	67.7	57.7	49.5	174	67.9	5.8	8.3	4.3	5.6	
Malden	78.4	25.5	20.3	33	28.5	-- <sup>5</sup>	6.9	-- <sup>5</sup>	5.6	
Medford	84.9	14.4	16.8	11	6.2	-- <sup>5</sup>	4.3	-- <sup>5</sup>	3.7	
Methuen	73.5	24.4	28.5	42	32.8	-- <sup>5</sup>	3.6	-- <sup>5</sup>	-- <sup>5</sup>	
New Bedford	70.9	60.5	54.5	221	72.4	6.3	5.8	-- <sup>5</sup>	2.9	
Newton	87.7	4.8	6.4	8	2.0	-- <sup>5</sup>	3.1	-- <sup>5</sup>	2.3	
Peabody	79.1	18.9	18.2	28	19.2	-- <sup>5</sup>	7.1	-- <sup>5</sup>	4.7	
Pittsfield	62.9	42.6	42.2	48	33.1	-- <sup>5</sup>	3.9	-- <sup>5</sup>	3.9	
Plymouth	83.5	18.7	21.0	34	19.4	-- <sup>5</sup>	5.4	-- <sup>5</sup>	3.9	
Quincy	87.2	23.9	19.6	34	16.9	-- <sup>5</sup>	4.3	-- <sup>5</sup>	3.4	
Somerville	77.0	28.9	27.9	64	38.5	-- <sup>5</sup>	2.8	-- <sup>5</sup>	2.5	
Springfield	61.9	62.6	63.2	485	86.7	8.8	9.2	5.5	7.1	
Taunton	76.9	32.8	33.1	83	53.0	7.5	6.7	-- <sup>5</sup>	4.2	
Waltham	78.7	20.5	20.0	31	14.6	-- <sup>5</sup>	4.4	-- <sup>5</sup>	3.9	
Weymouth	93.3	16.5	17.0	31	22.2	-- <sup>5</sup>	3.2	-- <sup>5</sup>	2.7	
Worcester	63.7	44.6	43.6	304	46.2	8.1	7.8	6.5	6.1	

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. The 30 largest municipalities are the cities and towns in Massachusetts with the largest populations according to MISER 1998 population estimates (released in September 2000). 2. Crude birth rates represent the number of births per 1,000 residents; teen birth rates refer to the number of births per 1,000 females ages 15-19. 1999 birth rates are calculated using the 1998 MISER population estimates (released in September 2000). 3. Mothers who designated themselves as Asian, American Indian or Other. 4. Deaths per 1,000 live births. 5. Calculations based on fewer than 5 events are excluded.

Table B-3B: Resident Birth Characteristics, Community Health Network Areas (CHNAs), Massachusetts: 1999

CHNA	Population	Crude Birth Rate <sup>1</sup>	Mother's Race and Ethnicity					Very Low Birthweight (<1500 g) %	Low Birthweight (<2500 g) %
			Non-Hispanic White %	Non-Hispanic Black %	Hispanic %	Asian or Other <sup>2</sup> %			
STATE TOTAL	6,291,263	12.9	74.7	7.2	10.9	6.9	1.4	7.1	
Community Health Network of Berkshire County	138,938	9.3	89.5	3.2	3.5	3.2	0.7	6.6	
Upper Valley Health Web (Franklin County)	87,167	9.9	93.7	0.6	2.7	2.2	0.6	4.4	
Partnership for Health in Hampshire County (Northampton)	156,532	8.0	87.0	1.5	5.6	5.6	1.3	7.4	
Four (For) Communities (Holyoke, Chicopee, Ludlow, Westfield)	156,760	12.0	69.6	1.8	27.2	1.3	2.0	7.3	
The Community Health Connection (Springfield)	292,714	13.0	55.9	14.8	25.5	3.7	1.3	8.2	
Community Health Network of Southern Worcester County	114,693	11.8	89.7	0.8	7.3	1.8	1.6	7.5	
Community Partners for Health (Milford)	150,141	14.9	95.7	0.5	1.6	2.0	1.0	5.6	
Community Health Network of Greater Metro West (Framingham)	366,847	14.6	86.0	1.8	5.9	6.1	1.2	6.1	
Community Wellness Coalition (Worcester)	283,166	13.7	68.9	6.7	16.5	7.8	1.9	8.0	
Fitchburg/Gardner Community Health Network	261,025	12.5	83.6	2.2	10.1	3.8	1.0	6.5	
Greater Lowell Community Health Network	271,240	14.3	73.2	2.5	9.0	14.9	1.9	7.3	
Greater Lawrence Community Health Network	176,819	15.6	53.9	1.6	39.9	4.4	1.2	7.4	
Greater Haverhill Community Health Network	141,633	14.4	90.5	1.4	6.4	1.6	1.2	7.8	
Community Health Network North (Beverly/Gloucester)	119,363	11.3	94.4	0.5	1.4	3.5	0.9	6.9	
North Shore Community Health Network	277,854	13.0	72.0	5.8	15.7	6.3	1.7	8.1	
Greater Woburn/Concord/Littleton Community Health Network	212,366	12.4	85.0	1.7	2.6	9.8	1.0	5.7	
North Suburban Health Alliance (Medford/Malden/Melrose)	258,793	13.2	78.3	7.0	5.3	8.9	1.1	6.5	
Greater Cambridge/Somerville Community Health Network	274,988	11.7	69.7	9.1	9.4	11.7	1.2	6.5	
West Suburban Health Network (Newton/Waltham)	260,082	11.3	84.5	2.6	4.7	8.0	1.0	6.7	
Alliance for Community Health (Boston/Chelsea/Revere/Winthrop)	710,372	14.2	39.8	26.9	22.1	11.1	1.9	8.3	
Blue Hills Community Health Alliance (Greater Quincy)	367,516	12.8	82.1	5.5	2.2	10.1	1.2	7.2	
Greater Brockton Community Health Network	232,912	13.6	72.0	13.2	5.9	8.8	1.7	7.7	
South Shore Community Partners in Prevention (Plymouth)	178,277	14.6	96.2	0.8	0.9	2.0	1.6	5.6	
Greater Attleboro-Taunton Health & Education Response	234,841	14.2	91.9	2.2	2.8	2.7	1.2	5.9	
Partners for a Healthier Community (Fall River)	138,621	10.7	88.7	3.9	3.8	3.2	1.3	7.6	
Greater New Bedford Health & Human Services Coalition	199,706	11.1	80.3	4.4	8.4	6.5	1.1	6.9	
Cape and Islands Community Health Network	227,897	10.0	90.4	2.2	2.0	4.9	1.5	6.8	

Table B-3B.(cont'd) Resident Birth Characteristics, Community Health Network Areas (CHNAs), Massachusetts: 1999

CHNA	Births					Deaths			
	Adequate Prenatal Care %	Public Payment for Prenatal Care %	Unmarried %	Teen Mothers 15 to 19 years #	Rate <sup>3</sup>	Infant Mortality Rate <sup>4</sup>		Neonatal Mortality Rate <sup>4</sup>	
						1999	1997-1999	1999	1997-1999
<b>STATE TOTAL</b>									
Community Health Network of Berkshire County	79.4	26.8	26.5	5,515	26.6	5.2	5.2	4.1	4.0
Upper Valley Health Web (Franklin County)	69.9	36.5	35.9	123	23.6	-- <sup>5</sup>	4.1	-- <sup>5</sup>	2.8
Partnership for Health in Hampshire County (Northampton)	76.9	31.8	30.9	83	29.3	-- <sup>5</sup>	4.9	-- <sup>5</sup>	3.4
Four (For) Communities (Holyoke, Chicopee, Ludlow, Westfield)	82.1	22.1	25.0	78	7.7	4.0	3.3	-- <sup>5</sup>	2.6
The Community Health Connection (Springfield)	74.5	44.3	43.2	251	43.9	4.8	5.6	3.7	4.3
Community Health Network of Southern Worcester County	69.1	47.1	46.4	561	53.4	7.1	7.2	4.7	5.5
Community Partners for Health (Milford)	74.0	25.3	31.1	125	32.3	8.9	6.0	8.9	5.3
Community Health Network of Greater Metro West (Framingham)	85.2	10.0	12.7	70	13.2	4.9	4.1	3.6	2.6
Community Wellness Coalition (Worcester)	87.0	10.7	11.0	127	11.9	3.4	4.3	2.6	3.3
Fitchburg/Gardner Community Health Network	67.1	31.5	32.3	345	33.4	7.2	7.7	5.7	6.1
Greater Lowell Community Health Network	78.3	23.6	26.1	272	30.6	4.0	3.7	2.8	2.7
Greater Lawrence Community Health Network	72.2	26.0	27.6	289	32.3	7.5	5.0	5.4	3.8
Greater Haverhill Community Health Network	67.2	40.6	39.3	327	51.6	5.1	6.3	4.7	4.9
Community Health Network North (Beverly/Gloucester)	83.2	17.2	21.1	124	28.6	4.4	4.3	3.9	3.7
North Shore Community Health Network	87.6	14.2	15.2	59	14.4	-- <sup>5</sup>	4.2	-- <sup>5</sup>	3.5
Greater Woburn/Concord/Littleton Community Health Network	74.9	32.5	29.4	265	32.2	4.4	6.3	3.3	4.4
North Suburban Health Alliance (Medford/Malden/Melrose)	84.4	5.2	8.0	43	7.1	1.9	2.4	-- <sup>5</sup>	1.8
Greater Cambridge/Somerville Community Health Network	83.3	16.8	16.4	85	12.2	3.8	5.1	3.5	4.4
West Suburban Health Network (Newton/Waltham)	83.4	16.4	17.6	122	18.2	4.0	3.0	3.4	2.4
Alliance for Community Health (Boston/Chelsea/Revere/Winthrop)	86.6	7.6	8.6	53	5.3	3.1	3.4	2.7	2.9
Blue Hills Community Health Alliance (Greater Quincy)	78.6	45.8	41.5	887	39.9	6.6	6.3	5.7	4.9
Greater Brockton Community Health Network	89.9	14.3	14.2	126	12.4	3.4	4.4	3.0	3.5
South Shore Community Partners in Prevention (Plymouth)	75.8	30.7	32.3	223	27.4	5.4	5.1	5.0	4.6
Greater Attleboro-Taunton Health & Education Response	88.7	12.4	15.6	91	14.6	6.9	5.8	5.7	4.9
Partners for a Healthier Community (Fall River)	82.1	20.6	20.5	210	26.9	7.2	5.7	5.4	4.1
Greater New Bedford Health & Human Services Coalition	79.9	42.9	38.5	180	39.8	8.8	7.3	6.1	5.6
Cape and Islands Community Health Network	75.7	45.7	41.5	277	38.1	5.4	4.5	2.3	2.1
	80.9	28.5	23.9	119	19.7	5.7	5.6	3.9	4.0

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Births per 1,000 residents (male and female). 1999 birth rates are calculated using the 1998 MISCER population estimates (released in September 2000). 2. Mothers who designated themselves as Asian, American Indian or Other. 3. Births per 1,000 female residents ages 15-19. 4. Deaths per 1,000 live births. 5. Calculations based on fewer than 5 events are excluded.

**Table B-4. Age-Specific and Crude Birth Rates, Massachusetts: 1990 and 1999**

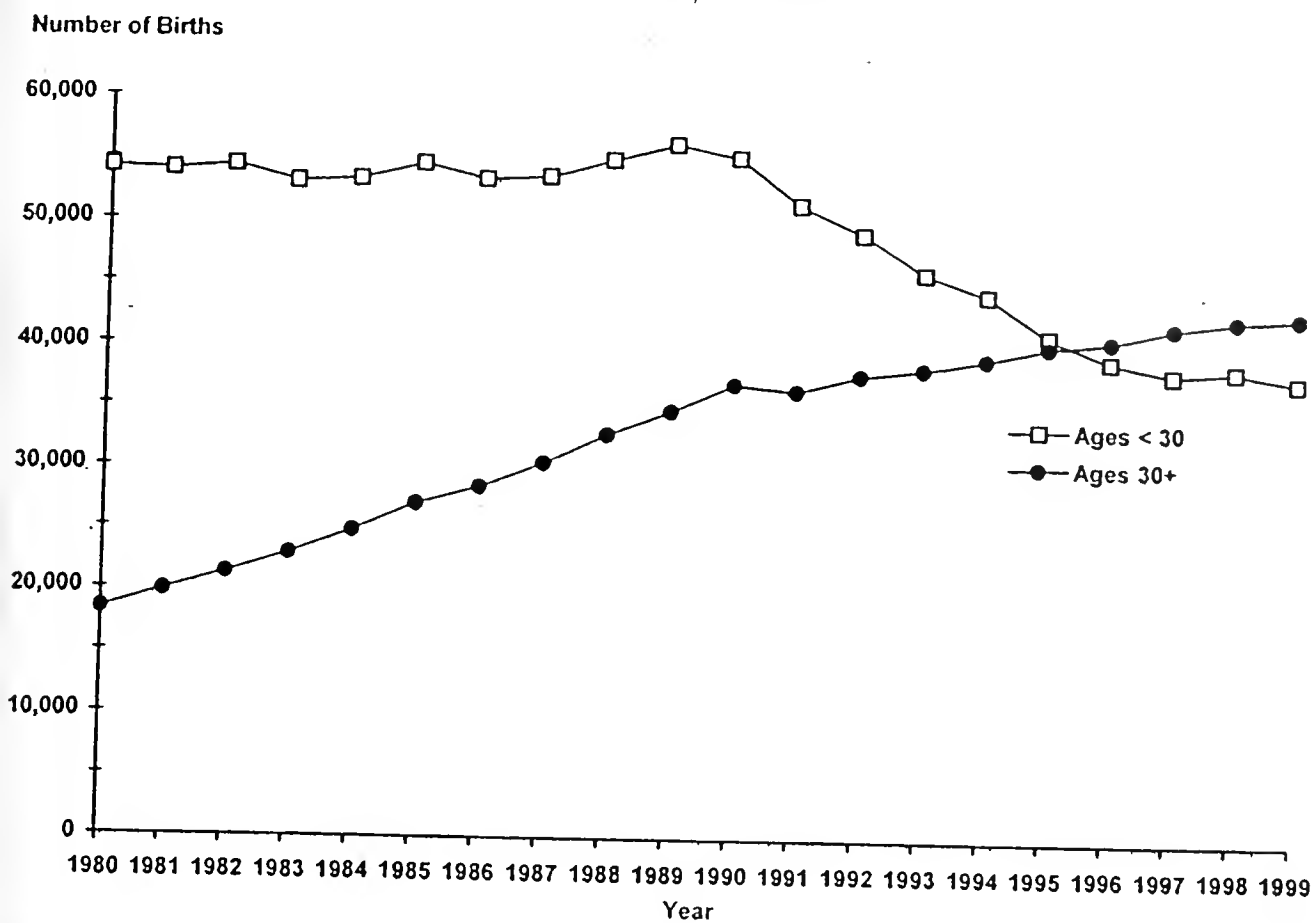
Mother's Age	1990		1999		Percent Change in Rate
	Births <sup>1</sup>	Rate	Births	Rate <sup>2</sup>	
12-14	124	1.3	73	0.6	-53.8
15-19	7,258	35.8	5,515	26.6	-25.7
20-24	18,115	70.5	11,813	50.4	-28.5
25-29	29,913	107.5	20,382	81.2	-24.5
30-34	25,687	92.1	26,330	104.5	13.5
35-39	9,795	40.1	13,973	53.0	32.2
40-44	1,522	6.9	2,656	10.5	52.2
45+	46	0.3 <sup>3</sup>	124	0.5 <sup>3</sup>	62.5
Birth rate, ages 15-44 <sup>4</sup>	92,290	62.2	80,669	55.2	-11.3
Crude Birth Rate <sup>5</sup>	92,461	15.4	80,866	12.9	-16.5

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

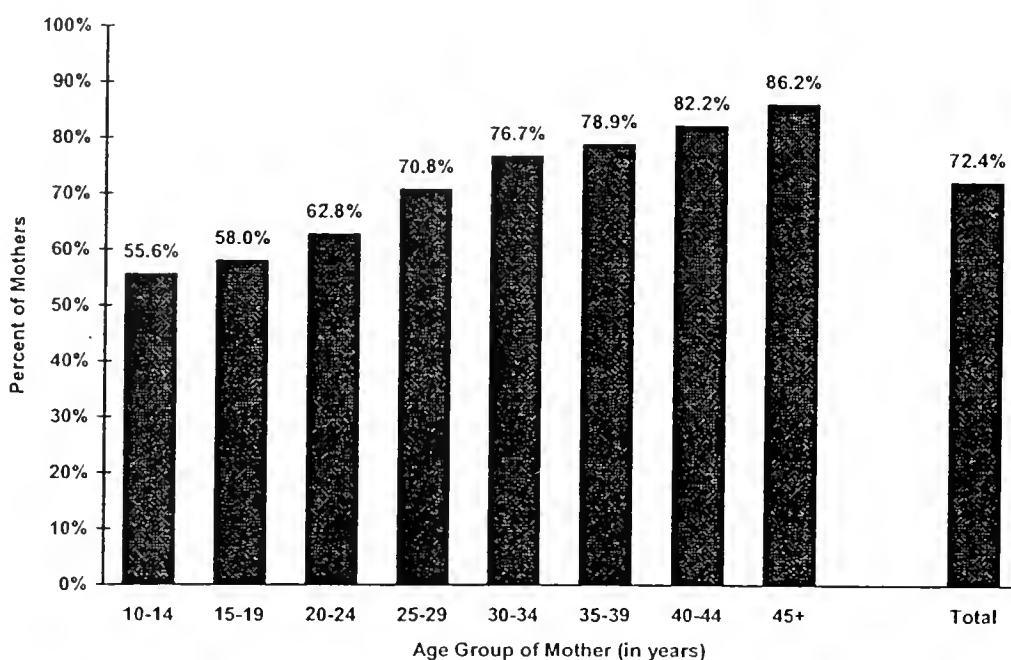
1. Differences in the number of births from previous publications are the result of updating of the birth files. The number of births for all age groups does not always add to the total number of births as mother's age is sometimes not recorded on the birth certificate. 2. 1999 birth rates are calculated using the 1998 MISER population estimates (released in September 2000). 3. Denominator is female population ages 45-49. 4. Rate represents the total number of births to women age 15-44 per 1,000 women age 15 to 44. 5. Births per 1,000 residents (females and males). Includes births to mothers of all age groups and mothers for whom age is unknown.



Figure B-4. Trends in the Number of Births by Mother's Age Group,  
Massachusetts: 1980-1999



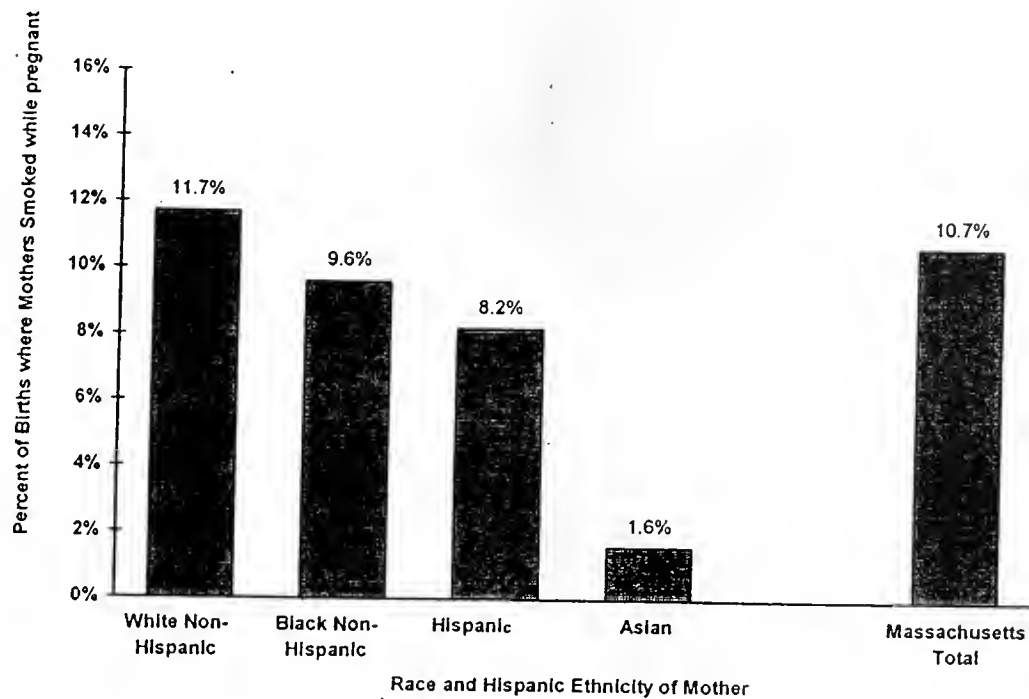
**Figure B-5. Percent of Mothers Breastfeeding or Intending to Breastfeed<sup>1</sup> by Age Group, Massachusetts: 1999**



NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Information about breastfeeding was reported by the hospital at the time the birth certificate was completed.

Figure B-6. Smoking Prevalence<sup>1</sup> During Pregnancy, by Race and Hispanic Ethnicity of Mother, Massachusetts: 1999

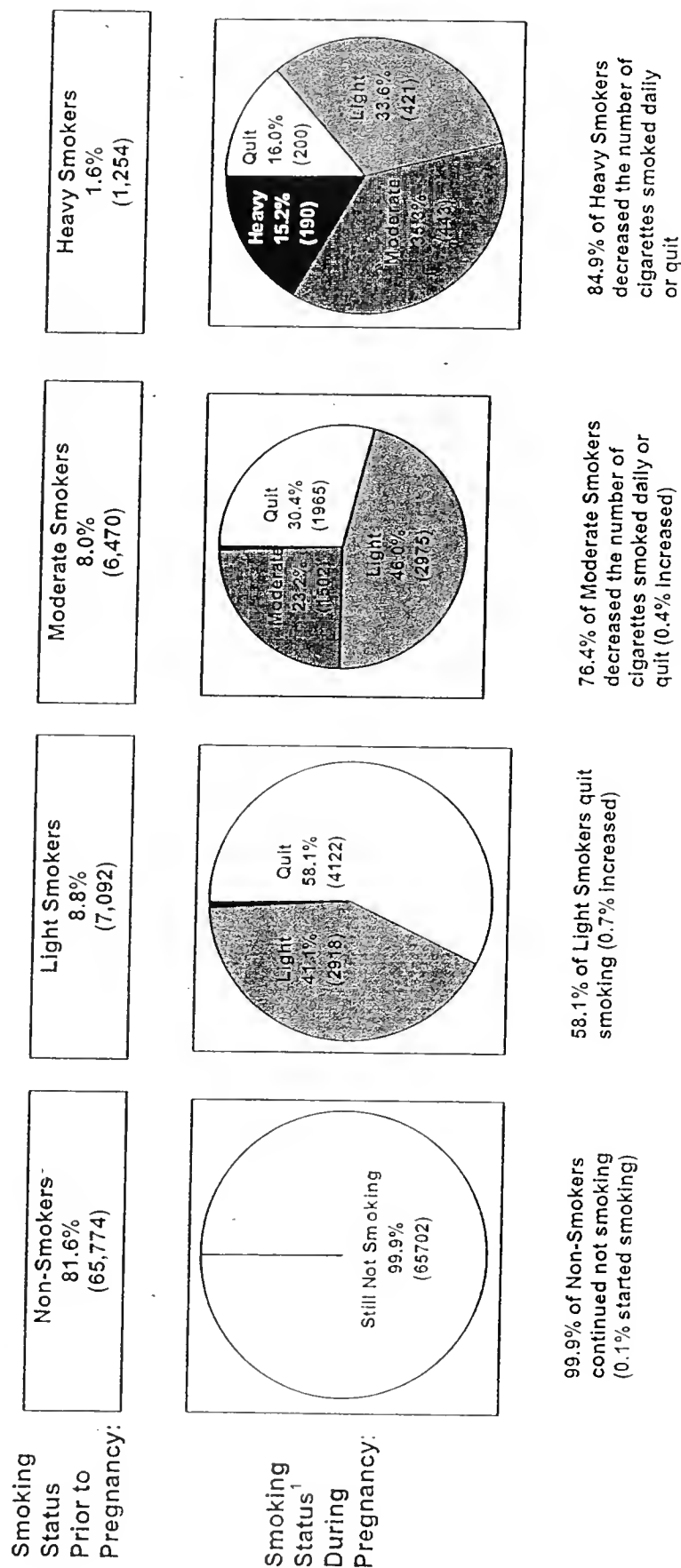


NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Based on information provided on the birth certificate by mother. Mothers with more than one delivery are counted for each birth.

NOTE: Maternal smoking is self-reported, usually following childbirth; these data should be interpreted cautiously.

**Figure B-7. The Distribution of Smoking Status during Pregnancy by Smoking Status Prior to Pregnancy, Massachusetts: 1999**



NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated. Not all percentages add up to 100 due to a small number of mothers with unknown smoking status.

1. Light Smokers=1-10 cigarettes daily; Moderate Smokers=11-20 cigarettes daily; Heavy Smokers=21 cigarettes or more daily.

Table B-5A. Parity<sup>1</sup> by Age of Mother, Massachusetts: 1999

Age of Mother (years)		Total Births	1st	2nd	3rd	4th	5th+
STATE TOTAL	# <sup>2</sup>	80,866	35,844	27,213	11,948	3,903	1,958
	% <sup>3</sup>	100.0	44.3	33.7	14.8	4.8	2.4
10-14	#	73	73	0	0	0	0
	%	100.0	100.0	0.0	0.0	0.0	0.0
15-19	#	5,515	4,603	793	97	20	2
	%	100.0	83.5	14.4	1.8	0.4	0.0
20-24	#	11,813	6,293	3,781	1,291	340	108
	%	100.0	53.3	32.0	10.9	2.9	0.9
25-29	#	20,382	9,929	6,640	2,594	845	374
	%	100.0	48.7	32.6	12.7	4.1	1.8
30-34	#	26,330	10,089	9,937	4,353	1,312	639
	%	100.0	38.3	37.7	16.5	5.0	2.4
35-39	#	13,973	4,012	5,100	3,111	1,131	619
	%	100.0	28.7	36.5	22.3	8.1	4.4
40-44	#	2,656	806	924	483	244	199
	%	100.0	30.3	34.8	18.2	9.2	7.5
45+	#	124	39	38	19	11	17
	%	100.0	31.5	30.6	15.3	8.9	13.7

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated  
1. The number of live births including this birth. 2. State totals include births of unknown parity and unknown mother's age. 3. Percents may not sum to 100.0 due to rounding.

**Table B-5B. Number and Percentage Distribution of Births<sup>1</sup> by Plurality and Age,  
Massachusetts: 1990-1999**

Singletons				Multiples						Total births	
				<u>Twins</u>		<u>Triplets or more</u>		<u>Total Multiples</u>			
Age Group	Year	#	%	#	%	#	%	#	%	#	%
All Ages											
	1990	90,049	97.4	2,312	2.5	99	0.1	2,411	2.6	92,460	100.0
	1991	85,802	97.3	2,285	2.6	89	0.1	2,374	2.7	88,176	100.0
	1992	84,722	97.2	2,347	2.7	133	0.2	2,480	2.8	87,202	100.0
	1993	82,055	97.0	2,367	2.8	205	0.2	2,572	3.0	84,627	100.0
	1994	81,187	96.9	2,357	2.8	214	0.3	2,571	3.1	83,758	100.0
	1995	78,935	96.8	2,429	3.0	198	0.2	2,627	3.2	81,562	100.0
	1996	77,355	96.5	2,621	3.3	194	0.2	2,815	3.5	80,170	100.0
	1997	77,203	96.1	2,856	3.6	262	0.3	3,118	3.9	80,321	100.0
	1998	78,004	95.8	3,114	3.8	288	0.4	3,402	4.2	81,406	100.0
	1999	77,473	95.8	3,147	3.9	246	0.3	3,393	4.2	80,866	100.0
Ages <35											
	1990	79,081	97.5	1,946	2.4	70	0.1	2,016	2.5	81,097	100.0
	1991	74,810	97.5	1,863	2.4	76	0.1	1,939	2.5	76,749	100.0
	1992	73,043	97.3	1,914	2.6	103	0.1	2,017	2.7	75,060	100.0
	1993	70,042	97.2	1,849	2.6	158	0.2	2,007	2.8	72,049	100.0
	1994	68,644	97.2	1,844	2.6	164	0.2	2,008	2.8	70,652	100.0
	1995	65,669	97.2	1,787	2.6	141	0.2	1,928	2.9	67,597	100.0
	1996	63,560	96.9	1,935	2.9	126	0.2	2,061	3.1	65,621	100.0
	1997	62,598	96.7	1,949	3.0	170	0.3	2,119	3.3	64,717	100.0
	1998	62,719	96.4	2,193	3.4	170	0.3	2,363	3.6	65,082	100.0
	1999	61,816	96.4	2,147	3.3	150	0.2	2,297	3.6	64,113	100.0
Ages 35+											
	1990	10,968	96.5	366	3.2	29	0.3	395	3.5	11,363	100.0
	1991	10,987	96.2	422	3.7	13	0.1	435	3.8	11,422	100.0
	1992	11,675	96.2	433	3.6	30	0.3	463	3.8	12,138	100.0
	1993	12,007	95.5	518	4.1	47	0.4	565	4.5	12,572	100.0
	1994	12,543	95.7	513	3.9	50	0.4	563	4.3	13,106	100.0
	1995	13,264	95.0	642	4.6	57	0.4	699	5.0	13,963	100.0
	1996	13,793	94.8	686	4.7	68	0.5	754	5.2	14,547	100.0
	1997	14,602	93.6	907	5.8	92	0.6	999	6.4	15,601	100.0
	1998	15,282	93.6	921	5.6	118	0.7	1,039	6.4	16,321	100.0
	1999	15,657	93.5	1,000	6.0	96	0.6	1,096	6.5	16,753	100.0

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

**Table B-6. Resident Births By Mother's Age, Marital Status, and Race/Ethnicity  
Massachusetts: 1999**

Age of Mother	Marital Status	Total	White Non-Hisp.	Black Non-Hisp.	Hispanic	Asian	Other	Unknown
<b>Grand Total</b>		80,840	60,390	5,841	8,812	4,137	1,492	168
<b>Total Married</b>		59,392	49,250	2,399	3,381	3,450	767	145
<b>Total Unmarried</b>		21,448	11,140	3,442	5,431	687	725	23
<19	<b>Total</b>	3,603	1,631	485	1,185	148	151	3
	<b>Married</b>	187	72	12	72	16	15	0
	<b>Unmarried</b>	3,416	1,559	473	1,113	132	136	3
19	<b>Total</b>	1,983	1,054	234	560	67	67	1
	<b>Married</b>	306	170	19	81	26	10	0
	<b>Unmarried</b>	1,677	884	215	479	41	57	1
20-24	<b>Total</b>	11,811	6,825	1,351	2,724	521	380	10
	<b>Married</b>	4,482	2,972	262	776	341	125	6
	<b>Unmarried</b>	7,329	3,853	1,089	1,948	180	255	4
25-29	<b>Total</b>	20,380	15,067	1,492	2,123	1,278	375	45
	<b>Married</b>	15,766	12,681	688	1,031	1,094	231	41
	<b>Unmarried</b>	4,614	2,386	804	1,092	184	144	4
30-34	<b>Total</b>	26,316	21,841	1,329	1,416	1,356	321	53
	<b>Married</b>	23,646	20,391	820	876	1,270	240	49
	<b>Unmarried</b>	2,670	1,450	509	540	86	81	4
35-39	<b>Total</b>	13,968	11,657	769	681	648	165	48
	<b>Married</b>	12,574	10,881	471	465	594	120	43
	<b>Unmarried</b>	1,394	776	298	216	54	45	5
40+	<b>Total</b>	2,779	2,315	181	123	119	33	8
	<b>Married</b>	2,431	2,083	127	80	109	26	6
	<b>Unmarried</b>	348	232	54	43	10	7	2

Table does not include 26 births to mothers of unknown marital status.

Table B-7. Resident Births to Teenage Mothers: 1970-1999

Year	Total Births	Age of Mother							Total <19	% of Total Births
		<14	14	15	16	17	18	19		
1970	93,582	11	70	320	802	1,726	3,043	4,285	10,257	11.0%
1971	86,755	26	84	313	875	1,738	2,981	4,000	10,017	11.5%
1972	76,835	21	103	348	955	1,841	2,834	3,690	9,792	12.7%
1973	72,237	12	93	393	959	1,759	2,584	3,282	9,082	12.6%
1974	70,071	18	79	333	895	1,762	2,524	3,181	8,792	12.5%
1975	68,070	20	84	325	915	1,678	2,560	3,085	8,667	12.7%
1976	65,947	19	96	336	807	1,478	2,332	2,923	7,991	12.1%
1977	67,838	19	68	270	792	1,477	2,293	2,913	7,832	11.5%
1978	68,526	18	67	303	737	1,445	2,252	2,979	7,801	11.4%
1979	70,568	11	70	283	773	1,413	2,306	2,916	7,772	11.0%
1980	72,591	15	56	300	740	1,360	2,202	3,092	7,765	10.7%
1981	73,931	13	82	275	722	1,357	2,164	2,816	7,429	10.0%
1982	75,749	15	83	299	753	1,328	2,161	2,722	7,361	9.7%
1983	76,031	8	78	255	726	1,278	2,053	2,521	6,919	9.1%
1984	78,198	9	75	265	714	1,307	2,061	2,585	7,016	9.0%
1985	81,766	16	97	295	698	1,283	1,986	2,595	6,970	8.5%
1986	82,163	15	82	334	712	1,233	1,954	2,521	6,851	8.3%
1987	84,343	17	79	327	796	1,337	1,965	2,498	7,019	8.3%
1988	88,047	27	120	352	732	1,450	2,068	2,511	7,260	8.2%
1989	91,314	19	108	345	853	1,426	2,207	2,776	7,734	8.5%
1990	92,461	21	103	351	810	1,344	2,014	2,739	7,382	8.0%
1991	88,176	20	102	372	758	1,391	1,910	2,461	7,014	7.9%
1992	87,202	17	103	341	782	1,327	1,753	2,352	6,675	7.6%
1993	84,627	16	121	360	741	1,259	1,872	2,237	6,606	7.8%
1994	83,758	24	131	371	822	1,244	1,758	2,217	6,567	7.8%
1995	81,562	19	98	356	721	1,203	1,648	2,062	6,107	7.5%
1996	80,164	11	80	342	687	1,115	1,666	1,948	5,849	7.3%
1997	80,321	19	84	290	694	1,121	1,613	2,083	5,904	7.3%
1998	81,406	14	65	271	663	1,120	1,710	2,059	5,902	7.3%
1999	80,866	10	63	244	570	1,039	1,679	1,983	5,588	6.9%



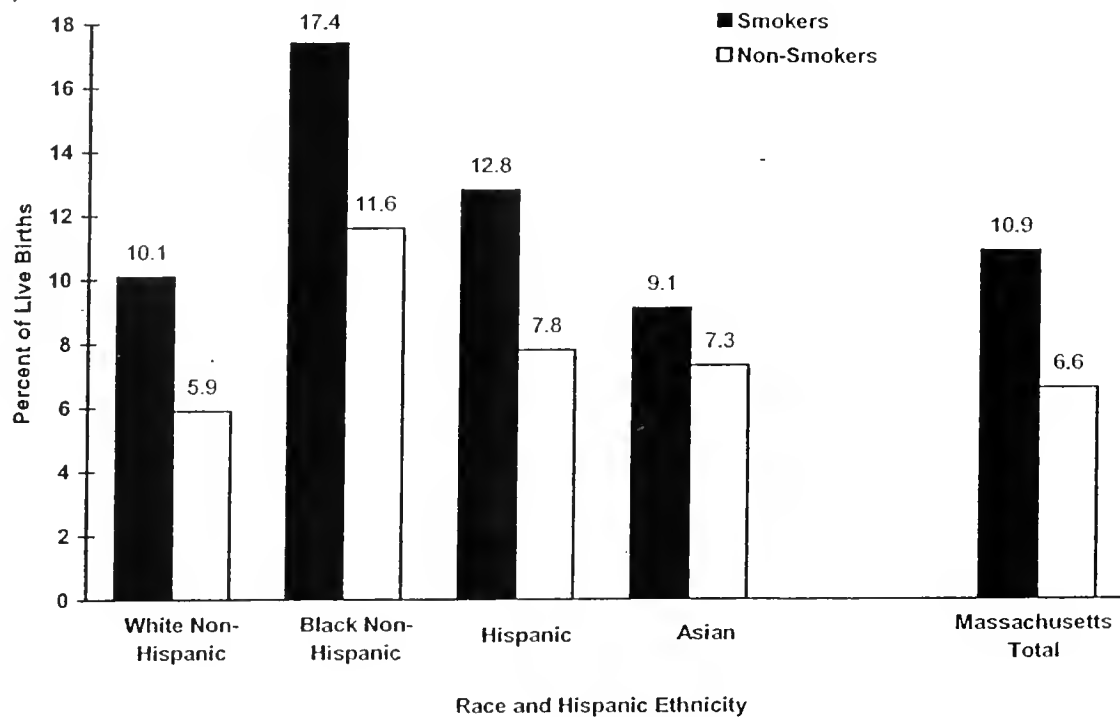
Table B-8. Births by Birthweight, Race and Hispanic Ethnicity, Massachusetts: 1999

Birthweight (in grams)	Total		White non-		Black non-		Hispanic		Hispanic		Asian		Other		Unknown	
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>
State Total	80,866	100.0	60,402	100.0	5,844	100.0	8,815	100.0	4,138	100.0	1,477	100.0			190	
<500	121	0.1	68	0.1	37	0.6	9	0.1	3	-- <sup>2</sup>	3	-- <sup>2</sup>			1	
500-999	433	0.5	266	0.4	94	1.6	49	0.6	14	0.3	10	0.7			0	
1000-1499	566	0.7	370	0.6	79	1.4	78	0.9	27	0.7	12	0.8			0	
1500-1999	1,178	1.5	840	1.4	115	2.0	131	1.5	62	1.5	30	2.0			0	
2000-2499	3,410	4.2	2,289	3.8	387	6.6	454	5.2	195	4.7	82	5.6			0	
2500-2999	11,722	14.5	7,787	12.9	1,105	18.9	1,617	18.3	926	22.4	274	18.6			3	
3000-3499	28,559	35.3	20,664	34.2	2,139	36.6	3,438	39.0	1,759	42.5	534	36.2			13	
3500-3999	25,018	30.9	19,943	33.0	1,403	24.0	2,315	26.3	921	22.3	411	27.8			25	
4000-4499	8,071	10.0	6,767	11.2	399	6.8	605	6.9	190	4.6	101	6.8			9	
4500-4999	1,365	1.7	1,152	1.9	70	1.2	96	1.1	27	0.7	18	1.2			2	
>=5000	155	0.2	125	0.2	10	0.2	15	0.2	3	-- <sup>2</sup>	2	-- <sup>2</sup>			0	
Unknown	268	0.3	131	0.2	6	0.1	8	0.1	11	0.3	0	0.0			112	
VLBW <sup>3</sup> (0-1499 g)	1,120	1.4	704	1.2	210	3.6	136	1.5	44	1.1	25	1.7			1	
LBW <sup>4</sup> (0-2499 g)	5,708	7.1	3,833	6.4	712	12.2	721	8.2	301	7.3	137	9.3			4	

NOTE: Percentages for detailed birthweight rows ("<500" through "Unknown") are calculated based on all births including those with unknown birthweight. Percentages for VLBW and LBW rows are calculated based on births with known birthweights only.

1. Percentages are based on column totals. 2. Calculations based on fewer than five events are excluded. 3. VLBW: Very Low Birthweight. 4. LBW: Low Birthweight.

**Figure B-8. Low Birthweight<sup>1</sup> Among Smoking and Nonsmoking<sup>2</sup> Mothers,  
by Race and Hispanic Ethnicity, Massachusetts: 1999**



NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated. Maternal smoking is self-reported, usually following childbirth; these data should be interpreted cautiously.

1. Low birthweight: less than 2,500 grams or 5.5 pounds.

2. Based on information provided on the birth certificate by the mother.

Table B-9. Low Birthweight<sup>1</sup> by Maternal Age, Race and Hispanic Ethnicity,  
Massachusetts: 1999

Mother's Age (in years)	Total LBW Infants		White non- Hispanic		Black non- Hispanic		Hispanic		Asian		Other		Unknown
	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	
State Total	5,708	7.1	3,833	6.4	712	12.2	721	8.2	301	7.3	137	9.3	4
<18	197	10.2	76	9.7	36	13.4	63	8.9	15	17.4	6	8.0	1
18-19	306	8.4	138	7.3	45	10.0	100	9.6	10	7.8	13	9.1	0
20-24	821	7.0	406	6.0	152	11.3	201	7.4	33	6.4	29	7.6	0
25-29	1,305	6.4	901	6.0	160	10.7	141	6.6	71	5.6	30	8.0	2
30-34	1,715	6.5	1,291	5.9	165	12.4	126	8.9	100	7.4	32	10.5	1
35-39	1,080	7.8	813	7.0	128	16.7	72	10.6	49	7.6	18	10.9	0
40+	284	10.3	208	9.0	26	14.4	18	14.6	23	19.3	9	27.3	0

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Low Birthweight: less than 2,500 grams or 5.5 pounds at birth. 2. Percentages are based upon the number of low birthweight infants divided by the total births in each age and race/ethnicity category.

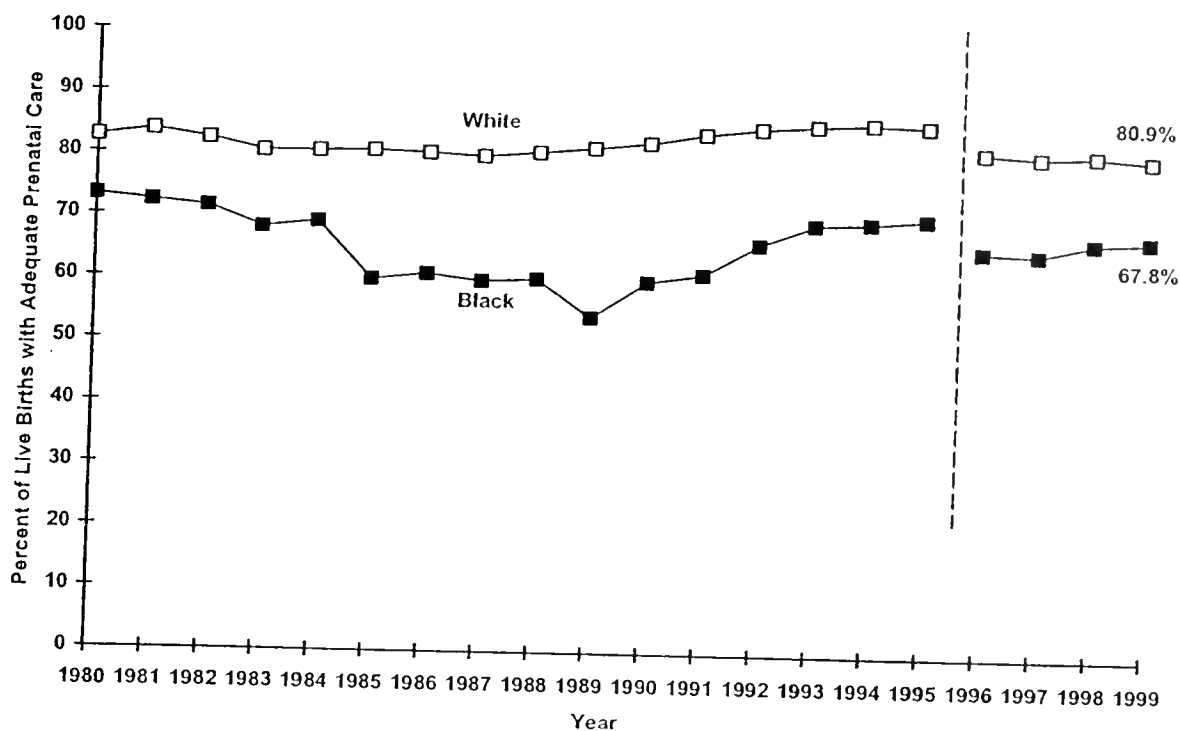
Table B-10. Births by Gestational Age<sup>1</sup>, Race and Hispanic Ethnicity, Massachusetts: 1999

Gestational Age	Total		Non-Hispanic White		Non-Hispanic Black		Hispanic		Asian		Other <sup>3</sup>		Unknown	
	(weeks completed)	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#
State Total		80,866	100.0	60,402	100.0	5,844	100.0	8,815	100.0	4,138	100.0	1,477	100.0	190
<20		21	0.0	10	0.0	7	0.1	3	--.7	1	--.7	0	0.0	0
20-23		148	0.2	84	0.1	42	0.7	16	0.2	2	--.7	3	--.7	1
24-27		312	0.4	187	0.3	70	1.2	33	0.4	10	0.2	12	0.8	0
28-31		694	0.9	461	0.8	95	1.6	95	1.1	30	0.7	13	0.9	0
32-35		2,749	3.4	1,944	3.2	280	4.8	339	3.8	135	3.3	49	3.3	2
36		2,212	2.7	1,555	2.6	195	3.3	276	3.1	127	3.1	59	4.0	0
37-39 <sup>4</sup>		30,727	38.0	22,429	37.1	2,371	40.6	3,516	39.9	1,752	42.3	628	42.5	31
40		29,267	36.2	22,433	37.1	1,829	31.3	3,029	34.4	1,468	35.5	471	31.9	37
41		11,644	14.4	8,993	14.9	763	13.1	1,179	13.4	504	12.2	200	13.5	5
42		2,396	3.0	1,829	3.0	166	2.8	280	3.2	86	2.1	35	2.4	0
43		77	0.1	55	0.1	6	0.1	12	0.1	3	--.7	0	0.0	1
44+		18	0.0	15	0.0	0	0.0	2	--.7	0	0.0	1	--.7	0
Unknown <sup>5</sup>		601	0.7	407	0.7	20	0.3	35	0.4	20	0.5	6	0.4	113
Very early gestation, <28 weeks		481	0.6	281	0.5	119	2.0	52	0.6	13	0.3	15	1.0	1
Preterm, <37 weeks <sup>6</sup>		6,136	7.6	4,241	7.1	689	11.8	762	8.7	305	7.4	136	9.2	3

NOTE: Percentages for detailed gestational age category rows ("<20" through "Unknown") are calculated based on all births including those with unknown gestational age. Percentages for "Very early gestation" and "Preterm" rows are calculated based on births with known gestational age only.

1. A clinical estimate of the number of weeks of pregnancy completed; as estimated by the attendant at birth or the postnatal physician. 2. Percentages are based on column total. 3. Other races include American Indian and others not specified. 4. Normal gestational age is defined as 37-42 weeks. 5. Estimate of gestational age not provided. 6. Also known as early gestational age, premature delivery, or preterm delivery. 7. Calculations based on fewer than five events are excluded.

Figure B-9. Trends in Adequacy of Prenatal Care<sup>1</sup> by Race<sup>2</sup>, Massachusetts: 1980-1999



NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Due to changes beginning in 1996 in the collection of information on Adequacy of Prenatal Care, caution should be used when comparing these data over time. 2. On tables and graphs which include data prior to June 1986, the race classifications do not include ethnicity; most Hispanics are included in the race category of whites.

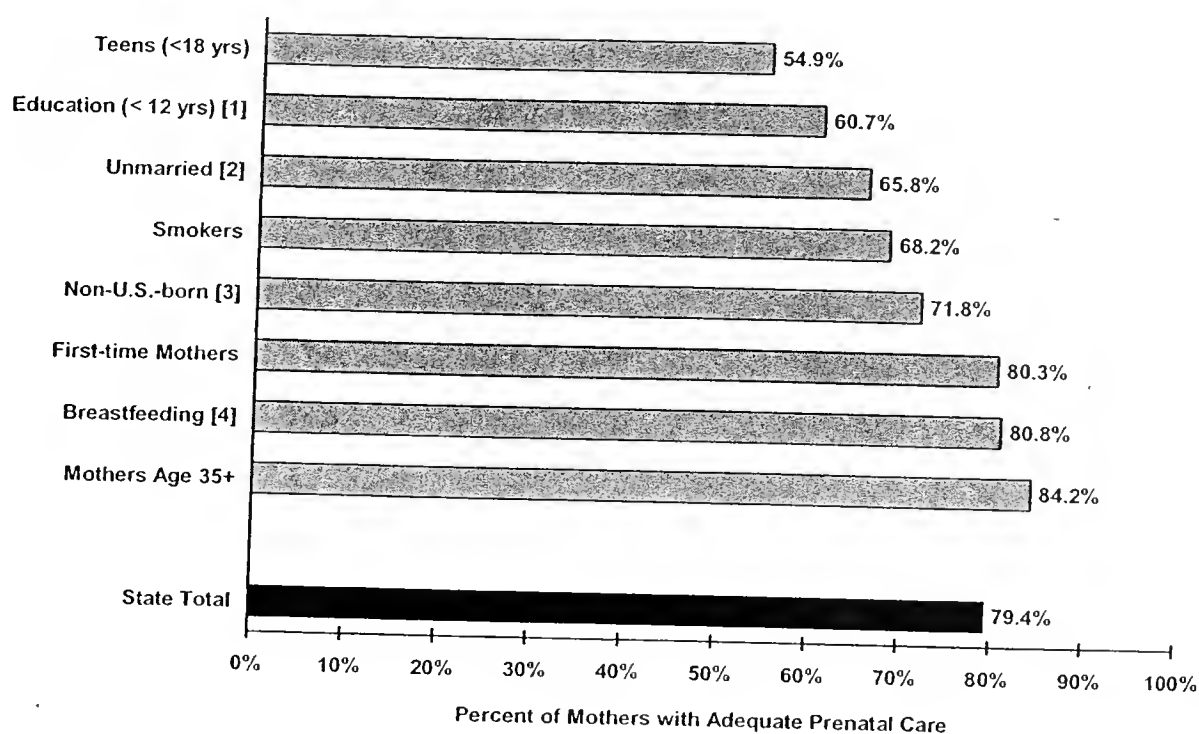
**Table B-11. Low Birthweight by Adequacy of Prenatal Care, Race  
and Hispanic Ethnicity, Massachusetts: 1999**

Race, Ethnicity, and Birthweight		Total <sup>1</sup>	Adequacy of Prenatal Care <sup>2</sup>		
			Adequate	Intermediate	Late/None
STATE TOTAL	Total Births	80,303	63,728	13,689	2,886
	# LBW <sup>3</sup>	5,648	4,261	1,086	301
	% LBW	7.0	6.7	7.9	10.5
White non- Hispanic	Total Births	60,066	49,903	8,672	1,491
	# LBW <sup>3</sup>	3,792	3,007	644	141
	% LBW	6.3	6.0	7.4	9.5
Black non-Hispanic	Total Births	5,812	3,990	1,372	450
	# LBW <sup>3</sup>	708	484	161	63
	% LBW	12.2	12.1	11.7	14.1
Hispanic	Total Births	8,772	5,831	2,291	650
	# LBW <sup>3</sup>	712	457	186	69
	% LBW	8.1	7.8	8.1	10.6
Asian	Total Births	4,113	2,993	941	179
	# LBW <sup>3</sup>	299	216	66	17
	% LBW	7.3	7.2	7.0	9.5
Other	Total Births	1,470	967	390	113
	# LBW <sup>3</sup>	135	97	27	11
	% LBW	9.2	10.0	6.9	9.7
Unknown	Total Births	70	44	23	3
	# LBW <sup>3</sup>	2	0	2	0

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. All data are based on the 80,303 births with known Adequacy of Prenatal Care data. 2. A detailed explanation of the levels of prenatal care is presented in the definitions section. 3. Low birthweight, less than 2,500 grams or 5.5 pounds.

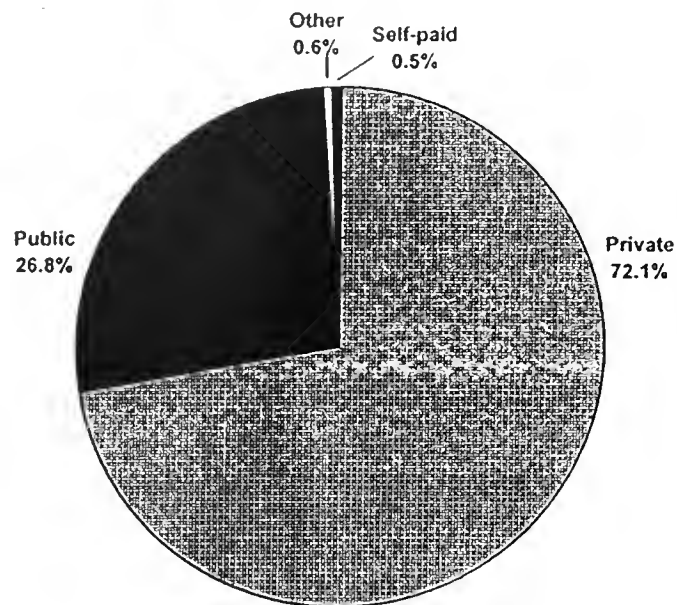
**Figure B-10. Adequacy of Prenatal Care for Selected Population Characteristics, Massachusetts: 1999**



NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Women 20 years of age and older. 2. Marital status at time of birth. 3. Non-U.S.-born includes women born outside of the 50 U.S. states, District of Columbia, and U.S. territories (Puerto Rico, U.S. Virgin Islands, Guam). 4. Mother was or was intending to breastfeed at the time the birth certificate was completed.

Figure B-11. Distribution of Prenatal Care Payment Source<sup>1</sup>,  
Massachusetts: 1999



NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Private: Blue Cross/Blue Shield, commercial insurance and HMO's Public: Medicaid, Medicare, Healthy Start, free care, and other government sources. Other: Worker's Compensation and other sources



**Table B-12. Birth Characteristics by Source of Prenatal Care Payment, Race and Hispanic Ethnicity, Massachusetts: 1999**

Race, Ethnicity, and Payment Source	Births <sup>1</sup>		Teen Births				Birthweight			
			<18 Years		<20 Years		Very Low <sup>2</sup>		Low <sup>3</sup>	
	#	%	#	%	#	%	#	%	#	%
<b>STATE TOTAL<sup>4</sup></b>	80,866	100.0	1,926	2.4	5,588	6.9	1,120	1.4	5,708	7.2
Public	21,211	26.8	1,364	6.4	4,001	18.9	335	1.6	1,800	8.5
Medicaid <sup>5</sup>	18,907	23.9	1,310	6.9	3,798	20.1	304	1.6	1,640	8.7
Other Public <sup>6</sup>	2,304	2.9	54	2.3	203	8.8	31	1.3	160	6.9
Private <sup>7</sup>	57,069	72.1	507	0.9	1,420	2.5	698	1.2	3,655	6.4
<b>Non-Hispanic White</b>	60,402	100.0	786	1.3	2,686	4.4	704	1.2	3,833	6.3
Public	9,798	16.6	451	4.6	1,606	16.4	110	1.1	734	7.5
Medicaid <sup>5</sup>	8,921	15.1	435	4.9	1,546	17.3	108	1.2	681	7.6
Other Public <sup>6</sup>	877	1.5	16	1.8	60	6.8	2	— <sup>8</sup>	53	6.0
Private <sup>7</sup>	48,534	82.4	304	0.6	962	2.0	529	1.1	2,906	6.0
<b>Non-Hispanic Black</b>	5,844	100.0	268	4.6	719	12.3	210	3.6	712	12.2
Public	3,313	57.0	187	5.6	549	16.6	111	3.4	402	12.1
Medicaid <sup>5</sup>	2,986	51.4	180	6.0	521	17.4	95	3.2	357	12.0
Other Public <sup>6</sup>	327	5.6	7	2.1	28	8.6	16	4.9	45	13.8
Private <sup>7</sup>	2,423	41.7	74	3.1	154	6.4	85	3.5	283	11.7
<b>Hispanic</b>	8,815	100.0	709	8.0	1,746	19.8	136	1.5	721	8.2
Public	6,160	70.1	610	9.9	1,519	24.7	99	1.6	514	8.3
Medicaid <sup>5</sup>	5,296	60.2	581	11.0	1,417	26.8	87	1.6	471	8.9
Other Public <sup>6</sup>	864	9.8	29	3.4	102	11.8	12	1.4	43	5.0
Private <sup>7</sup>	2,492	28.3	86	3.5	205	8.2	34	1.4	187	7.5
<b>Asian</b>	4,138	100.0	86	2.1	215	5.2	44	1.1	301	7.3
Public	1,090	26.5	61	5.6	162	14.9	6	0.6	77	7.1
Medicaid <sup>5</sup>	996	24.2	61	6.1	159	16.0	6	0.6	70	7.0
Other Public <sup>6</sup>	94	2.3	0	0.0	3	— <sup>8</sup>	0	0.0	7	7.4
Private <sup>7</sup>	2,969	72.2	23	0.8	48	1.6	35	1.2	218	7.3
<b>Other/Unknown<sup>9</sup></b>	1,477	100.0	75	5.1	218	14.8	25	1.7	137	9.3
Public	835	56.7	54	6.5	163	19.5	9	1.1	73	8.7
Medicaid <sup>5</sup>	695	47.2	52	7.5	153	22.0	8	1.2	61	8.8
Other Public <sup>6</sup>	140	9.5	2	— <sup>8</sup>	10	7.1	1	— <sup>8</sup>	12	8.6
Private <sup>7</sup>	604	41.0	20	3.3	51	8.4	15	2.5	59	9.8

**Table B-12 (cont'd). Birth Characteristics by Source of Prenatal Care Payment, Race, and Hispanic Ethnicity, Massachusetts: 1999**

Race, Ethnicity, and Payment Source	Prenatal Care							
	Adequate		Began 1st Trimester		Cesarean Section		Breastfeeding <sup>10</sup>	
	#	%	#	%	#	%	#	%
<b>STATE TOTAL<sup>4</sup></b>	63,728	79.4	67,732	84.3	18,080	22.4	57,394	72.4
Public	13,501	64.0	14,691	69.5	4,108	19.4	12,988	61.3
Medicaid <sup>5</sup>	12,093	64.3	13,176	70.0	3,590	19.0	11,092	58.7
Other Public <sup>6</sup>	1,408	61.4	1,515	66.0	519	22.5	1,897	82.4
Private <sup>7</sup>	48,560	85.3	51,266	90.0	13,501	23.7	43,734	76.7
<b>Non-Hispanic White</b>	49,903	83.1	52,845	87.9	13,762	22.8	42,416	71.9
Public	6,587	67.6	7,116	72.9	1,958	20.0	5,188	53.0
Medicaid <sup>5</sup>	5,974	67.3	6,463	72.7	1,734	19.4	4,493	50.4
Other Public <sup>6</sup>	613	70.3	653	74.8	224	25.5	695	79.4
Private <sup>7</sup>	41,822	86.4	44,156	91.1	11,407	23.5	36,778	75.8
<b>Non-Hispanic Black</b>	3,990	68.7	4,263	73.2	1,410	24.2	4,125	71.0
Public	2,006	61.0	2,203	66.8	713	21.6	2,146	64.8
Medicaid <sup>5</sup>	1,843	62.1	2,019	67.9	631	21.2	1,887	63.2
Other Public <sup>6</sup>	163	50.3	184	56.6	82	25.1	259	79.2
Private <sup>7</sup>	1,946	80.4	2,017	83.3	674	27.9	1,933	79.9
<b>Hispanic</b>	5,831	66.5	6,324	72.0	1,783	20.3	6,600	75.0
Public	3,787	61.7	4,152	67.6	1,121	18.2	4,464	72.5
Medicaid <sup>5</sup>	3,288	62.4	3,617	68.6	962	18.2	3,707	70.0
Other Public <sup>6</sup>	499	57.8	535	61.9	159	18.4	757	87.6
Private <sup>7</sup>	1,971	79.3	2,083	83.8	638	25.6	2,034	81.7
<b>Asian</b>	2,993	72.8	3,200	77.8	778	18.8	3,128	76.0
Public	630	58.1	680	62.7	142	13.0	622	57.1
Medicaid <sup>5</sup>	567	57.2	616	62.2	127	12.8	549	55.1
Other Public <sup>6</sup>	63	67.0	64	68.1	15	16.0	73	77.7
Private <sup>7</sup>	2,324	78.5	2,477	83.6	618	20.8	2,465	83.1
<b>Other/Unknown<sup>9</sup></b>	967	65.8	1,050	71.3	328	22.2	1,082	73.5
Public	485	58.2	532	63.8	171	20.5	561	67.3
Medicaid <sup>5</sup>	415	59.7	453	65.2	133	19.2	450	64.8
Other Public <sup>6</sup>	70	50.7	79	56.8	38	27.1	111	79.3
Private <sup>7</sup>	464	77.1	496	82.1	152	25.2	491	81.3

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. In the "Births" category, percentages are based on race/ethnicity totals (group column). For all other categories, percentages are based on Birth totals (row total) excluding unknowns for each characteristic. 2. Very low birthweight: less than 1,500 grams or 3.3 pounds. 3. Low Birthweight: less than 2,500 grams or 5.5 pounds. 4. Total births does not equal Public + Private. Other categories of prenatal care payment are also included in Total. Workers' Compensation, self-paid, and other. 5. Medicaid/MassHealth. 6. Other Public: Healthy Start, other government programs, and free care. 7. Private: Blue Cross/Blue Shield, commercial insurance, and HMO. 8. Calculations based on fewer than five events are excluded. 9. Other: Mothers who self-designated other races or for whom race was unknown. 10. Mother was intending to breastfeed at the time the birth certificate was completed.

**Table B-13. Cesarean Section Deliveries and Vaginal Births after Cesarean Section (VBACs) by Licensed Maternity Facility<sup>1</sup>, All Births, Massachusetts: 1999**

Facility	Occurrence Births <sup>2</sup>	Total C- Sections		Primary C- Section <sup>2</sup>		Repeat C- Section <sup>2</sup>		VBACs <sup>2</sup>	
		#	% <sup>3,4</sup>	#	% <sup>3,5</sup>	#	% <sup>3,6</sup>	#	% <sup>7</sup>
<b>STATE TOTAL</b>	<b>81,253</b>	<b>18,364</b>	<b>22.6</b>	<b>12,112</b>	<b>16.7</b>	<b>6,252</b>	<b>71.8</b>	<b>2,461</b>	<b>28.2</b>
Anna Jaques Hospital	964	191	19.8	129	14.7	62	72.9	23	27.1
Baystate Medical Center	4,910	990	20.2	648	14.8	342	64.7	187	35.3
Berkshire Medical Center	840	163	19.4	89	12.3	74	64.3	41	35.7
Beth Israel Deaconess Medical Center	5,085	1,338	26.3	923	20.7	415	65.8	216	34.2
Beverly Hospital	2,596	488	18.9	288	12.6	200	67.8	95	32.2
Boston Medical Center	1,824	427	23.4	287	17.6	140	72.5	53	27.5
Boston Regional Medical Center	127	34	26.8	24	21.6	10	62.5 <sup>8</sup>	6	37.5 <sup>8</sup>
Brigham and Women's Hospital	9,787	2,432	25.0	1,728	19.8	704	71.5	281	28.5
Brockton Hospital	1,320	256	19.4	169	14.2	87	65.4	46	34.6
Cambridge Hospital	666	132	19.8	85	14.1	47	73.4	17	26.6
Cape Cod Hospital	970	211	21.8	117	14.1	94	66.7	47	33.3
Caritas Good Samaritan Medical Center	1,080	241	22.3	152	16.1	89	66.9	44	33.1
Caritas Norwood Hospital	622	148	23.8	90	16.7	58	70.7	24	29.3
Charlton Memorial Hospital	1,576	310	19.7	183	13.0	127	77.0	38	23.0
Cooley Dickinson Hospital	875	170	19.4	124	15.6	46	59.0	32	41.0
Deaconess-Waltham Hospital	402	74	18.5	51	13.7	23	76.7 <sup>8</sup>	7	23.3 <sup>8</sup>
Emerson Hospital	1,478	320	21.7	199	15.4	121	65.8	63	34.2
Fairview Hospital	169	47	27.8	32	21.2	15	83.3 <sup>8</sup>	3	— <sup>9</sup>
Falmouth Hospital	622	140	22.9	87	16.0	53	79.1	14	20.9
Franklin Medical Center	535	96	17.9	62	12.6	34	77.3	10	22.7
Hale Hospital	353	60	17.0	44	13.7	16	50.0 <sup>8</sup>	16	50.0 <sup>8</sup>
Harrington Memorial Hospital	432	96	22.2	64	16.6	32	68.1	15	31.9
Heywood Hospital	532	82	15.4	48	10.0	34	64.2	19	35.8
Holy Family Hospital and Medical Center	1,314	364	27.7	248	21.5	116	73.0	43	27.0
Holyoke Hospital	483	96	19.9	61	14.1	35	71.4	14	28.6
Jordan Hospital	778	189	24.3	114	16.7	75	78.1	21	21.9
Lawrence General Hospital	1,429	252	17.6	150	11.5	102	81.6	23	18.4
Leominster Hospital	1,405	332	23.7	185	15.3	147	79.0	39	21.0
Lowell General Hospital	2,052	403	19.6	237	12.9	166	75.8	53	24.2
Martha's Vineyard Hospital	121	23	19.0	18	16.4	5	45.5 <sup>8</sup>	6	54.5 <sup>8</sup>
Mary Lane Hospital	226	46	20.4	34	16.4	12	63.2 <sup>8</sup>	7	36.8 <sup>8</sup>

**Table B-13 (cont'd). Cesarean Section Deliveries and Vaginal Births After Cesarean Section (VBACs) by Licensed Maternity Facility<sup>1</sup>, All Births, Massachusetts: 1999**

Facility	Occurrence Births <sup>2</sup>	Total C-Sections		Primary C-Section <sup>2</sup>		Repeat C-Section <sup>2</sup>		VBACs <sup>2</sup>	
		#	% <sup>3,4</sup>	#	% <sup>3,5</sup>	#	% <sup>3,6</sup>	#	% <sup>7</sup>
Massachusetts General Hospital	2,738	623	22.8	444	17.5	179	86.9	27	13.1
Melrose-Wakefield Hospital	2,225	553	24.9	332	17.2	221	75.4	72	24.6
Mercy Hospital	800	146	18.3	93	12.7	53	81.5	12	18.5
Metrowest Medical Center-Framingham Union Campus	2,425	560	23.1	369	16.9	191	77.6	55	22.4
Milford-Whitinsville Regional Hospital	602	124	20.6	79	14.9	45	62.5	27	37.5
Morton Hospital	686	176	25.7	96	16.7	80	72.7	30	27.3
Mount Auburn Hospital	1,246	242	19.4	173	15.3	69	61.1	44	38.9
Nantucket Cottage Hospital	88	22	25.0	19	22.4	3	— <sup>9</sup>	0	0.0
New England Medical Center Hospital	1,578	443	28.1	308	21.8	135	81.8	30	18.2
Newton Wellesley Hospital	3,643	882	24.2	639	19.1	243	82.7	51	17.3
North Adams Regional Hospital	304	75	24.7	34	13.3	41	83.7	8	16.3
North Shore Medical Center - Salem Hospital	1,736	336	19.4	220	13.9	116	78.4	32	21.6
Saint Vincent Hospital	1,962	335	17.2	243	13.7	92	50.0	92	50.0
Saints Memorial Medical Ctr.-St. John's Campus	652	165	25.3	120	20.2	45	78.9	12	21.1
South Shore Hospital	3,914	962	24.6	608	17.5	354	80.1	88	19.9
St. Elizabeth's Medical Center of Boston	1,527	395	25.9	265	19.7	130	71.0	53	29.0
St. Luke's Hospital	1,530	356	23.4	205	15.4	151	77.0	45	23.0
Sturdy Memorial Hospital	1,062	243	22.9	147	16.1	96	64.4	53	35.6
Tobey Hospital	498	90	18.1	68	14.7	22	66.7 <sup>8</sup>	11	33.3 <sup>8</sup>
UMass Memorial Medical Center-West Campus	4,053	925	22.8	614	17.1	311	67.3	151	32.7
Winchester Hospital	2,411	560	23.3	366	17.1	194	74.9	65	25.1

NOTES: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated. Boston Regional Medical Center closed to births on February 6, 1999. Name change: Caritas Good Samaritan Medical Center from Good Samaritan Medical Center.

1. A licensed maternity facility is a medical unit licensed by the Commonwealth for the care of women during pregnancy and childbirth. 2. See Section Definitions for explanation of occurrence births, primary and repeat Cesarean sections, and VBACs. The percentages provided in this table are based on occurrence births and may differ from data presented elsewhere in this book which are based on resident births. 3. The percentage of Cesarean births reported is not adjusted for risk factors such as mother's age, birthweight, or complications of labor and delivery, which would influence the number of procedures in a particular facility. Caution should be used when comparing unadjusted percentages. 4. Percentage of total Cesarean sections= (total Cesarean births/all births) x 100. 5. Percentage primary Cesarean sections=(primary Cesarean sections/all births-repeat Cesarean sections-VBACs) x 100. 6. Percentage repeat Cesarean sections= (repeat Cesarean sections/(repeat Cesarean sections + VBACs)) x100. 7. Percentage VBACs= (VBAC deliveries/(repeat Cesarean sections + VBAC)) x 100. 8. This percentage is based on less than 40 total births and should be interpreted with caution. 9. Calculations based on fewer than five events are excluded.

**Table B-13A. Birth Characteristics by Licensed Maternity Facility<sup>1</sup>, Massachusetts: 1999**

Facility	Location	Occurrence Births <sup>2</sup> (#)	Low Birthweight (%)	Public Payment for Delivery <sup>3</sup> (%)	Adequate Prenatal Care (%)
<b>STATE TOTAL<sup>4</sup></b>		<b>81,765</b>	<b>7.1</b>	<b>26.2</b>	<b>79.3</b>
Anna Jaques Hospital	Newburyport	964	5.1	14.0	83.5
Baystate Medical Center	Springfield	4,910	10.3	40.3	71.4
Berkshire Medical Center	Pittsfield	840	5.2	32.0	65.2
Beth Israel Deaconess Medical Center	Boston	5,085	12.5	16.5	81.3
Beverly Hospital	Beverly	2,596	4.8	23.3	85.7
Boston Medical Center	Boston	1,824	11.4	86.8	50.8
Boston Regional Medical Center	Stoneham	127	7.9	6.3	74.8
Brigham and Womens Hospital	Boston	9,787	10.4	18.1	97.6
Brockton Hospital	Brockton	1,320	5.4	41.9	68.5
Cambridge Birth Center	Cambridge	61	— <sup>5</sup>	27.9	60.0
Cambridge Hospital	Cambridge	666	3.3	49.2	60.0
Cape Cod Hospital	Barnstable	970	4.9	33.8	81.8
Caritas Good Samaritan Medical Center	Brockton	1,080	5.7	39.6	63.4
Caritas Norwood Hospital	Norwood	622	3.2	14.0	88.6
Charlton Memorial Hospital	Fall River	1,576	6.3	34.2	80.7
Cooley Dickinson Hospital	Northampton	875	3.6	21.2	87.0
Deaconess-Waltham Hospital	Waltham	402	3.0	25.1	82.3
Emerson Hospital	Concord	1,478	3.0	2.9	87.7
Fairview Hospital	Great Barrington	169	4.1	32.7	76.8
Falmouth Hospital	Falmouth	622	4.6	29.4	75.2
Franklin Medical Center	Greenfield	535	3.2	38.9	79.4
Hale Hospital	Haverhill	353	6.5	51.6	76.2
Harrington Memorial Hospital	Southbridge	432	4.9	44.9	84.0
Heywood Hospital	Gardner	532	2.6	36.3	67.3
Holy Family Hospital and Medical Center	Methuen	1,314	3.8	18.1	74.5
Holyoke Hospital	Holyoke	483	4.3	48.7	72.7
Jordan Hospital	Plymouth	778	2.8	25.5	74.9
Lawrence General Hospital	Lawrence	1,429	6.2	61.1	56.3
Leominster Hospital	Leominster	1,405	4.7	31.2	81.3
Lowell General Hospital	Lowell	2,052	5.0	34.0	64.9
Martha's Vineyard Hospital	Oak Bluffs	121	0.0	31.4	88.4

**Table B-13A. (cont'd) Births Characteristics by Licensed Maternity Facility<sup>1</sup>, Massachusetts: 1999**

Facility	Location	Occurrence Births <sup>2</sup> (#)	Low Birthweight (%)	Public Payment for Delivery <sup>3</sup> (%)	Adequate Prenatal Care (%)
Mary Lane Hospital	Ware	226	5.3	36.7	79.6
Massachusetts General Hospital	Boston	2,738	9.4	31.7	71.6
Melrose-Wakefield Hospital	Melrose	2,225	4.6	16.9	86.2
Mercy Hospital	Springfield	800	3.1	52.1	69.5
Metrowest Medical Center-Framingham Union Campus	Framingham	2,425	4.5	17.8	91.4
Milford-Whitinsville Regional Hospital	Milford	602	2.5	22.5	82.9
Morton Hospital	Taunton	686	5.0	37.0	75.6
Mount Auburn Hospital	Cambridge	1,246	3.5	9.6	86.1
Nantucket Cottage Hospital	Nantucket	88	-- <sup>5</sup>	21.6	79.1
New England Medical Center Hospital	Boston	1,578	22.1	30.9	78.7
Newton Wellesley Hospital	Newton	3,643	3.8	1.1	82.7
North Adams Regional Hospital	North Adams	304	3.9	41.8	83.6
North Shore Birth Center	Beverly	84	0.0	9.5	78.6
North Shore Medical Center - Salem Hospital	Salem	1,736	5.2	32.6	64.9
Saint Vincent Hospital	Worcester	1,962	4.6	18.9	79.4
Saints Memorial Medical Ctr.-St. John's Campus	Lowell	652	4.3	33.6	66.2
South Shore Hospital	Weymouth	3,914	4.1	8.5	95.7
St. Elizabeth's Medical Center of Boston	Boston	1,527	10.1	28.0	81.8
St. Luke's Hospital	New Bedford	1,530	5.4	51.5	73.7
Sturdy Memorial Hospital	Attleboro	1,062	2.8	20.6	81.9
The Birthplace At Wellesley	Wellesley	84	0.0	-- <sup>5</sup>	79.5
Tobey Hospital	Wareham	498	3.3	36.6	76.1
Umass Memorial Medical Center-West Campus	Worcester	4,053	10.4	29.3	60.9
Winchester Hospital	Winchester	2,411	4.3	4.8	79.9
All Other Hospitals		2	0.0	50.0	0.0
Home Births, Enroute, Other		281	12.6	35.3	48.5

NOTES: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated. Boston Regional Medical Center closed to births on February 6, 1999. Name change: Caritas Good Samaritan Medical Center from Good Samaritan Medical Center.

1. A licensed maternity facility is a medical unit licensed by the Commonwealth for the care of women during pregnancy and childbirth. 2. See Section Definitions for explanation of occurrence births. 3. Public payment for delivery includes Medicaid/Commonwealth, Medicare, Healthy Start, other government programs, and free care.

4. The percentages provided in this row are based on occurrence births and may differ from data presented elsewhere in this book which are based on resident births.

5. Calculations based on values of 1-4 for medical characteristics of facilities with less than 200 births are suppressed based Guidelines for Release of Births Data, Bureau of Health Statistics, Research and Evaluation, Massachusetts Department of Public Health.

**Table B-14A. Birth Characteristics: Occurrence and Resident Births and Infant Deaths,  
Massachusetts Municipalities: 1999**

Community	Occurrence Births	Resident Births	Low Birthweight	Teen Births, < 20 years	Infant Deaths	Neonatal Deaths
<b>STATE TOTAL</b>	<b>81,765</b>	<b>80,866</b>	<b>5,708</b>	<b>5,588</b>	<b>418</b>	<b>332</b>
Abington	0	189	18	9	1	1
Acton	1	261	11	2	0	0
Acushnet	0	96	-- <sup>1</sup>	5	0	0
Adams	0	78	7	9	0	0
Agawam	0	279	20	11	1	1
Alford	0	1	0	0	0	0
Amesbury	0	236	14	19	4	4
Amherst	4	175	13	9	0	0
Andover	0	354	17	3	2	2
Aquinnah (Gay Head)	0	2	0	0	0	0
Arlington	2	560	26	5	1	1
Ashburnham	0	60	-- <sup>1</sup>	5	0	0
Ashby	0	34	-- <sup>1</sup>	3	2	2
Ashfield	1	17	-- <sup>1</sup>	0	0	0
Ashland	0	252	13	2	2	1
Athol	0	118	5	17	0	0
Attleboro	1,063	562	27	33	3	3
Auburn	1	158	6	7	1	1
Avon	0	45	-- <sup>1</sup>	0	0	0
Ayer	2	117	5	3	0	0
Barnstable	975	479	39	28	3	2
Barre	3	61	-- <sup>1</sup>	5	0	0
Becket	1	14	0	1	0	0
Bedford	1	203	12	1	0	0
Belchertown	0	164	15	12	0	0
Bellingham	1	197	19	9	5	4
Belmont	1	280	18	3	3	3
Berkley	0	99	7	7	0	0
Berlin	1	48	-- <sup>1</sup>	3	0	0
Bernardston	0	23	-- <sup>1</sup>	4	0	0
Beverly	2,681	487	35	25	0	0
Billerica	3	556	44	14	4	3
Blackstone	0	101	-- <sup>1</sup>	9	0	0
Blandford	0	12	0	0	0	0
Bolton	0	70	-- <sup>1</sup>	0	0	0
Boston	22,576	8,017	679	775	59	51
Bourne	0	242	13	9	0	0
Boxborough	0	62	-- <sup>1</sup>	2	0	0
Boxford	0	96	6	0	0	0
Boylston	0	42	-- <sup>1</sup>	1	0	0
Braintree	0	447	35	12	2	2

**Table B-14A. Birth Characteristics: Occurrence and Resident Births and Infant Deaths,  
Massachusetts Municipalities: 1999**

Community	Occurrence Births	Resident Births	Low Birthweight	Teen Births, < 20 years	Infant Deaths	Neonatal Deaths
Brewster	1	61	-- <sup>1</sup>	2	1	0
Bridgewater	0	303	13	7	1	1
Brimfield	1	34	-- <sup>1</sup>	2	0	0
Brockton	2,405	1,451	125	173	6	5
Brookfield	0	38	-- <sup>1</sup>	2	0	0
Brookline	2	589	43	2	1	1
Buckland	0	17	0	1	0	0
Burlington	1	323	21	2	0	0
Cambridge	1,980	1,062	85	44	4	3
Canton	0	288	11	1	0	0
Carlisle	1	64	6	0	0	0
Carver	1	130	10	5	2	2
Charlemont	0	11	0	1	0	0
Charlton	0	156	13	5	2	2
Chatham	1	39	5	0	1	1
Chelmsford	1	395	28	7	3	3
Chelsea	2	641	48	92	0	0
Cheshire	0	26	-- <sup>1</sup>	3	0	0
Chester	0	15	0	2	0	0
Chesterfield	1	10	0	0	0	0
Chicopee	2	595	45	64	4	4
Chilmark	0	6	0	0	0	0
Clarksburg	0	16	-- <sup>1</sup>	1	0	0
Clinton	0	154	9	7	0	0
Cohasset	0	106	11	0	1	1
Colrain	0	11	-- <sup>1</sup>	1	0	0
Concord	1,480	158	-- <sup>1</sup>	0	0	0
Conway	0	12	0	0	0	0
Cummington	1	9	-- <sup>1</sup>	0	0	0
Dalton	1	69	5	5	0	0
Danvers	0	269	14	7	1	1
Dartmouth	2	229	17	12	1	0
Dedham	0	285	17	10	1	1
Deerfield	1	53	-- <sup>1</sup>	2	0	0
Dennis	1	136	15	12	0	0
Dighton	0	66	5	7	0	0
Douglas	0	101	-- <sup>1</sup>	4	1	1
Dover	0	68	10	0	0	0
Dracut	0	360	22	17	4	4
Dudley	0	100	7	5	0	0
Dunstable	0	40	-- <sup>1</sup>	0	0	0
Duxbury	0	192	10	2	0	0
East Bridgewater	0	183	10	1	1	1
East Brookfield	0	27	-- <sup>1</sup>	3	0	0
East Longmeadow	0	133	10	3	1	1



**Table B-14A. Birth Characteristics: Occurrence and Resident Births and Infant Deaths,  
Massachusetts Municipalities: 1999**

Community	Occurrence Births	Resident Births	Low Birthweight	Teen Births, < 20 years	Infant Deaths	Neonatal Deaths
Eastham	0	39	— <sup>1</sup>	2	0	0
Easthampton	2	186	8	17	1	0
Easton	0	278	28	5	2	2
Edgartown	0	49	6	3	0	0
Egremont	0	8	— <sup>1</sup>	0	0	0
Erving	0	15	— <sup>1</sup>	0	0	0
Essex	1	34	0	2	0	0
Everett	1	520	26	33	1	1
Fairhaven	0	139	10	6	1	1
Fall River	1,576	1,097	84	152	10	6
Falmouth	623	275	20	19	3	2
Fitchburg	3	566	39	94	3	2
Florida	0	3	0	0	0	0
Foxborough	0	236	17	5	0	0
Framingham	2,428	1,000	67	54	6	6
Franklin	0	504	28	5	3	1
Freetown	1	85	6	4	0	0
Gardner	532	235	13	32	0	0
Georgetown	0	121	11	3	0	0
Gill	0	16	0	0	0	0
Gloucester	0	350	13	17	4	4
Goshen	0	2	0	0	0	0
Gosnold	0	1	0	0	0	0
Grafton	0	207	11	5	2	2
Granby	0	66	5	1	2	2
Granville	0	17	— <sup>1</sup>	1	0	0
Great Barrington	169	75	8	6	0	0
Greenfield	536	193	9	26	2	1
Groton	1	165	15	0	0	0
Groveland	0	83	— <sup>1</sup>	0	0	0
Hadley	0	35	— <sup>1</sup>	4	0	0
Halifax	0	105	6	6	2	2
Hamilton	0	115	9	0	0	0
Hampden	0	49	— <sup>1</sup>	2	2	1
Hancock	0	5	0	0	0	0
Hanover	0	191	— <sup>1</sup>	0	1	1
Hanson	0	129	9	10	1	1
Hardwick	0	34	— <sup>1</sup>	1	1	0
Harvard	0	50	— <sup>1</sup>	0	0	0
Harwich	0	90	8	1	1	0
Hatfield	2	26	— <sup>1</sup>	0	0	0
Haverhill	354	921	77	85	2	1
Hawley	0	1	0	0	0	0
Heath	0	6	0	0	0	0
Hingham	0	279	9	5	0	0

**Table B-14A. Birth Characteristics: Occurrence and Resident Births and Infant Deaths,  
Massachusetts Municipalities: 1999**

Community	Occurrence Births	Resident Births	Low Birthweight	Teen Births, < 20 years	Infant Deaths	Neonatal Deaths
Hinsdale	0	31	— <sup>1</sup>	2	0	0
Holbrook	0	116	7	6	2	2
Holden	2	166	10	3	0	0
Holland	0	23	— <sup>1</sup>	1	0	0
Holliston	1	153	10	1	0	0
Holyoke	484	603	50	149	3	1
Hopedale	2	73	— <sup>1</sup>	0	1	1
Hopkinton	0	200	13	1	0	0
Hubbardston	0	64	— <sup>1</sup>	3	1	1
Hudson	3	260	14	8	0	0
Hull	1	112	7	6	0	0
Huntington	0	23	— <sup>1</sup>	3	0	0
Ipswich	0	162	14	8	0	0
Kingston	0	180	15	3	3	2
Lakeville	0	123	9	5	0	0
Lancaster	1	68	— <sup>1</sup>	1	1	1
Lanesborough	0	25	— <sup>1</sup>	2	0	0
Lawrence	1,432	1,411	117	280	8	7
Lee	0	53	— <sup>1</sup>	2	0	0
Leicester	0	121	13	5	3	2
Lenox	2	42	— <sup>1</sup>	1	0	0
Leominster	1,410	575	49	60	2	1
Leverett	1	12	0	0	0	0
Lexington	1	241	16	1	1	1
Leyden	0	5	0	1	0	0
Lincoln	3	100	— <sup>1</sup>	2	1	1
Littleton	1	125	— <sup>1</sup>	3	0	0
Longmeadow	1	136	8	2	1	1
Lowell	2,708	1,676	142	238	14	9
Ludlow	1	206	16	9	0	0
Lunenburg	0	108	7	5	0	0
Lynn	2	1,387	123	179	8	6
Lynnfield	0	131	11	1	0	0
Malden	1	788	60	33	4	4
Manchester-by-the-Sea	0	48	— <sup>1</sup>	1	0	0
Mansfield	0	397	17	7	2	0
Marblehead	1	283	15	2	1	1
Marion	0	51	— <sup>1</sup>	0	0	0
Marlborough	1	562	30	26	3	3
Marshfield	2	402	19	4	0	0
Mashpee	0	131	5	11	0	0
Mattapoisett	0	71	5	1	0	0
Maynard	0	135	9	5	0	0
Medfield	0	162	7	0	0	0
Medford	3	638	42	11	4	3

**Table B-14A. Birth Characteristics: Occurrence and Resident Births and Infant Deaths,  
Massachusetts Municipalities: 1999**

Community	Occurrence Births	Resident Births	Low Birthweight	Teen Births, < 20 years	Infant Deaths	Neonatal Deaths
Medway	0	203	12	0	0	0
Melrose	2,226	359	23	3	1	1
Mendon	1	77	-- <sup>1</sup>	1	0	0
Merrimac	0	82	-- <sup>1</sup>	1	0	0
Methuen	1,314	537	42	42	2	2
Middleborough	0	261	17	15	3	3
Middlefield	0	3	0	0	0	0
Middleton	0	86	-- <sup>1</sup>	1	0	0
Milford	602	360	31	23	1	1
Millbury	0	135	8	6	0	0
Millis	0	150	15	1	0	0
Millville	0	42	-- <sup>1</sup>	0	0	0
Milton	1	325	27	6	3	3
Monroe	0	1	0	0	0	0
Monson	0	105	8	3	0	0
Montague	1	110	5	9	1	1
Monterey	1	14	-- <sup>1</sup>	1	0	0
Montgomery	0	3	0	0	0	0
Mount Washington	0	1	0	0	0	0
Nahant	0	34	-- <sup>1</sup>	0	0	0
Nantucket	89	122	10	6	4	4
Natick	2	472	35	6	1	1
Needham	1	382	29	2	0	0
New Ashford	0	3	-- <sup>1</sup>	0	0	0
New Bedford	1,533	1,267	94	224	8	4
New Braintree	0	10	-- <sup>1</sup>	1	0	0
New Marlborough	0	21	-- <sup>1</sup>	0	0	0
New Salem	0	13	0	0	0	0
Newbury	0	84	8	1	0	0
Newburyport	964	214	18	8	1	1
Newton	3,646	874	56	8	1	1
Norfolk	0	133	-- <sup>1</sup>	0	0	0
North Adams	307	164	7	30	0	0
North Andover	0	366	22	4	2	2
North Attleboro	0	382	16	14	5	5
North Brookfield	0	42	-- <sup>1</sup>	5	0	0
North Reading	0	181	16	1	2	2
Northampton	880	223	20	13	1	1
Northborough	1	187	10	4	2	1
Northbridge	0	197	10	15	0	0
Northfield	0	33	-- <sup>1</sup>	0	0	0
Norton	0	261	18	9	0	0
Norwell	0	109	8	1	0	0
Norwood	622	353	28	4	0	0
Oak Bluffs	121	48	5	2	0	0

**Table B-14A. Birth Characteristics: Occurrence and Resident Births and Infant Deaths,  
Massachusetts Municipalities: 1999**

Community	Occurrence Births	Resident Births	Low Birthweight	Teen Births, < 20 years	Infant Deaths	Neonatal Deaths
Oakham	0	16	0	1	0	0
Orange	1	80	— <sup>1</sup>	13	0	0
Orleans	0	28	— <sup>1</sup>	1	0	0
Otis	0	13	0	1	0	0
Oxford	1	149	15	12	2	2
Palmer	0	130	11	19	0	0
Paxton	0	37	0	1	0	0
Peabody	0	561	50	28	4	3
Pelham	1	14	— <sup>1</sup>	1	0	0
Pembroke	0	282	23	11	3	3
Pepperell	2	168	12	6	0	0
Peru	0	5	0	1	0	0
Petersham	0	8	0	0	0	0
Phillipston	0	13	0	1	0	0
Pittsfield	843	491	32	48	1	1
Plainfield	0	3	0	1	0	0
Plainville	0	95	— <sup>1</sup>	3	0	0
Plymouth	780	716	30	34	4	2
Plympton	0	29	— <sup>1</sup>	1	0	0
Princeton	1	35	— <sup>1</sup>	1	1	0
Provincetown	1	19	0	1	0	0
Quincy	4	1,083	84	35	4	3
Randolph	1	408	41	21	0	0
Raynham	0	156	5	12	2	2
Reading	0	317	10	0	1	1
Rehoboth	0	116	12	7	1	1
Revere	1	622	55	29	5	5
Richmond	1	35	— <sup>1</sup>	7	0	0
Rochester	0	45	— <sup>1</sup>	3	0	0
Rockland	1	253	18	16	2	2
Rockport	0	63	— <sup>1</sup>	6	0	0
Rowe	0	5	0	0	0	0
Rowley	0	65	— <sup>1</sup>	1	1	1
Royalston	0	7	0	1	0	0
Russell	0	26	— <sup>1</sup>	3	0	0
Rutland	0	86	— <sup>1</sup>	6	0	0
Salem	1,737	504	38	46	2	1
Salisbury	0	90	9	8	1	1
Sandisfield	0	7	0	0	0	0
Sandwich	1	211	6	5	0	0
Saugus	0	253	21	5	0	0
Savoy	0	7	0	0	0	0
Scituate	1	248	10	2	3	3
Seekonk	1	125	8	11	2	1
Sharon	0	180	9	3	1	0

**Table B-14A. Birth Characteristics: Occurrence and Resident Births and Infant Deaths,  
Massachusetts Municipalities: 1999**

Community	Occurrence Births	Resident Births	Low Birthweight	Teen Births, < 20 years	Infant Deaths	Neonatal Deaths
Sheffield	0	28	0	0	0	0
Shelburne	1	13	0	3	0	0
Sherborn	0	58	-- <sup>1</sup>	0	0	0
Shirley	0	76	-- <sup>1</sup>	6	1	1
Shrewsbury	0	464	27	10	1	1
Shutesbury	2	18	-- <sup>1</sup>	0	0	0
Somerset	1	134	11	11	0	0
Somerville	4	949	49	65	4	4
South Hadley	0	132	6	9	0	0
Southampton	0	47	-- <sup>1</sup>	0	0	0
Southborough	0	147	5	0	0	0
Southbridge	433	219	20	44	4	4
Southwick	1	89	-- <sup>1</sup>	2	0	0
Spencer	0	154	9	18	2	2
Springfield	5,721	2,383	213	496	21	13
Sterling	0	83	-- <sup>1</sup>	3	1	1
Stockbridge	2	12	0	1	0	0
Stoneham	127	267	19	4	0	0
Stoughton	1	315	15	16	1	1
Stow	0	95	6	0	1	1
Sturbridge	3	91	-- <sup>1</sup>	3	1	1
Sudbury	1	263	10	1	0	0
Sunderland	2	30	0	2	0	0
Sutton	0	86	-- <sup>1</sup>	3	0	0
Swampscott	0	181	16	2	0	0
Swansea	0	139	9	11	3	3
Taunton	687	795	55	83	6	3
Templeton	0	76	-- <sup>1</sup>	7	0	0
Tewksbury	0	393	23	9	3	1
Tisbury	0	41	--	2	0	0
Tolland	0	3	0	0	0	0
Topsfield	0	55	-- <sup>1</sup>	0	0	0
Townsend	0	109	8	2	0	0
Truro	0	9	0	0	0	0
Tyngsborough	0	176	9	4	0	0
Tyringham	0	0	0	0	0	0
Upton	0	112	-- <sup>1</sup>	0	0	0
Uxbridge	0	182	5	4	0	0
Wakefield	0	334	22	1	0	0
Wales	0	23	0	2	0	0
Walpole	0	278	20	4	1	1
Waltham	404	681	42	31	4	3
Ware	226	108	12	11	0	0
Wareham	498	235	15	25	2	0
Warren	1	45	-- <sup>1</sup>	6	0	0

**Table B-14A. Birth Characteristics: Occurrence and Resident Births and Infant Deaths,  
Massachusetts Municipalities: 1999**

Community	Occurrence Births	Resident Births	Low Birthweight	Teen Births, < 20 years	Infant Deaths	Neonatal Deaths
Warwick	0	10	0	2	0	0
Washington	0	1	0	1	0	0
Watertown	0	371	31	6	1	0
Wayland	1	150	7	0	0	0
Webster	0	207	16	18	1	1
Wellesley	85	340	20	1	2	2
Wellfleet	1	20	— <sup>1</sup>	0	0	0
Wendell	0	6	0	0	0	0
Wenham	0	38	10	0	0	0
West Boylston	0	64	5	3	1	0
West Bridgewater	0	77	12	2	0	0
West Brookfield	0	43	— <sup>1</sup>	3	0	0
West Newbury	0	50	5	1	0	0
West Springfield	1	330	22	30	1	1
West Stockbridge	0	10	0	0	0	0
West Tisbury	1	20	— <sup>1</sup>	1	0	0
Westborough	1	213	16	4	1	0
Westfield	3	437	25	27	2	2
Westford	0	278	13	3	1	1
Westhampton	0	10	0	0	0	0
Westminster	0	63	— <sup>1</sup>	1	0	0
Weston	1	117	9	0	0	0
Westport	1	111	8	8	0	0
Westwood	1	202	14	1	1	1
Weymouth	3,916	752	57	31	2	2
Whately	0	6	— <sup>1</sup>	0	0	0
Whitman	1	213	16	9	3	3
Wilbraham	1	118	10	0	0	0
Williamsburg	0	24	— <sup>1</sup>	1	1	0
Williamstown	1	24	0	0	0	0
Wilmington	1	330	18	10	1	1
Winchendon	0	126	8	17	0	0
Winchester	2,416	271	11	2	0	0
Windsor	0	14	— <sup>1</sup>	1	0	0
Winthrop	0	196	10	5	1	0
Woburn	1	498	44	18	2	1
Worcester	6,029	2,473	225	306	20	16
Worthington	0	11	— <sup>1</sup>	0	0	0
Wrentham	0	161	14	3	1	0
Yarmouth	0	213	15	16	0	0
Unknown	3	2	— <sup>1</sup>	0	0	0

<sup>1</sup> Values of 1-4 for medical characteristics of communities with less than 200 births are suppressed based on Guidelines for Release of Birth Data, Bureau of Health Statistics, Research and Evaluation, Massachusetts Department of Public Health

**Table B-14B. Birth Characteristics, Occurrence and Resident Births and Infant Deaths by County, Massachusetts: 1999**

County Name	Occurrence Births		Resident Births		Deaths	
	Number	Number	Low	Teen	Infant	Neonatal
			Birthweight	(< 20 years)		
<b>STATE TOTAL</b>	<b>81,765</b>	<b>80,866</b>	<b>5,708</b>	<b>5,588</b>	<b>418</b>	<b>332</b>
Barnstable	1,604	1,992	130	107	9	5
Berkshire	1,328	1,296	85	123	1	1
Bristol	4,865	6,534	440	628	46	31
Dukes	122	167	15	8	0	0
Essex	8,486	9,751	744	786	43	37
Franklin	546	717	33	65	3	2
Hampden	6,216	5,749	452	828	36	25
Hampshire	1,117	1,271	93	82	5	3
Middlesex	17,457	19,077	1,226	707	81	67
Nantucket	89	122	10	6	4	4
Norfolk	4,635	8,403	596	181	31	25
Plymouth	3,690	6,559	423	356	38	32
Suffolk	22,579	9,476	792	901	65	56
Worcester	9,028	9,750	668	810	56	44

State totals include births of unknown location.

**Table B-14C. Birth Characteristics, Occurrence and Resident Births and Infant Deaths,  
Massachusetts Community Health Network Areas (CHNAs): 1999**

Community Health Network Area	Occurrence Births	Resident Births			Deaths	
		Number	Low Birthweight	Teen (< 20 years)	Infant	Neonatal
<b>STATE TOTAL</b>	<b>81,765</b>	<b>80,866</b>	<b>5,708</b>	<b>5,588</b>	<b>418</b>	<b>332</b>
Community Health Network of Berkshire County	1,328	1,296	85	123	6	4
Upper Valley Health Web (Franklin County)	546	863	38	84	5	5
Partnership for Health in Hampshire County (Northampton)	1,117	1,248	92	79	7	6
Four (For) Communities (Holyoke, Chicopee, Ludlow, Westfield)	490	1,879	137	254	12	11
The Community Health Connection (Springfield)	5,725	3,813	312	572	27	19
Community Health Network of Southern Worcester County	439	1,351	101	129	11	9
Community Partners for Health (Milford)	606	2,235	124	73	11	6
Community Health Network of Greater Metro West (Frammingham)	2,439	5,362	324	128	22	16
Community Wellness Coalition (Worcester)	6,032	3,867	308	347	33	28
Fitchburg/Gardner Community Health Network	1,956	3,257	210	273	14	10
Greater Lowell Community Health Network	2,712	3,874	282	292	15	12
Greater Lawrence Community Health Network	2,746	2,754	202	330	13	8
Greater Haverhill Community Health Network	1,318	2,042	158	127	7	5
Community Health Network North (Beverly/Gloucester)	2,682	1,352	93	59	8	6
North Shore Community Health Network	1,740	3,603	291	270	22	16
Greater Woburn/Concord/Littleton Community Health Network	3,907	2,636	147	43	7	5
North Suburban Health Alliance (Medford/Malden/Melrose)	2,358	3,404	218	86	20	16
Greater Cambridge/Somerville Community Health Network	1,987	3,222	209	123	8	6
West Suburban Health Network (Newton/Waltham)	4,138	2,949	197	53	8	6
Alliance for Community Health (Boston/Chelsea/Revere/Winthrop)	22,581	10,065	835	903	52	39
Blue Hills Community Health Alliance (Greater Quincy)	4,546	4,690	337	127	23	18
Greater Brockton Community Health Network	2,407	3,170	245	228	18	17
South Shore Community Partners in Prevention (Plymouth)	784	2,609	147	92	10	8
Greater Attleboro-Taunton Health & Education Response	1,751	3,343	196	210	20	14
Partners for a Healthier Community (Fall River)	1,578	1,481	112	182	9	9
Greater New Bedford Health & Human Services Coalition	2,034	2,218	152	280	12	6
Cape and Islands Community Health Network	1,815	2,281	155	121	14	10



## DEATHS



## SECTION C

### DEATHS

Massachusetts resident deaths increased from 1998 (55,204 deaths) to 1999 (55,763 deaths). However, the 1999 death rate of 8.8 per 1,000 population was equivalent to the 1998 death rate of 8.8. As with live births, Massachusetts resident deaths include all deaths to Massachusetts residents regardless of the state in which the deaths occurred. Most data presented in this section are resident data. Occurrence data are used only for medical examiner data.

#### DEATHS BY RACE/ETHNICITY

From 1998 to 1999, the number of deaths by race/ethnicity remained relatively constant with white non-Hispanic residents comprising 93.8% of total deaths in Massachusetts. Black non-Hispanic deaths totaled 3.6% of total deaths, Hispanic deaths 1.7%, Asian/Pacific Islander non-Hispanic deaths 0.8%.

Prior to 1989, only a race question was included on death certificates. A separate item on Hispanic origin was added to the death record beginning January 1, 1989. This item asks whether the decedent was of Hispanic origin. If answered affirmatively, then specific Hispanic origin (e.g., Puerto Rican, Dominican, Cuban, etc.) is requested.

#### DEATHS BY AGE

Persons 75 years of age or older accounted for 63.1% of all resident deaths. The percent of deaths to residents in this age group vary widely by sex and race/ethnicity.

SEX	RACE	% OF DEATHS UNDER AGE 75	% OF DEATHS 75 YEARS AND OLDER
MALE	WHITE NON-HISPANIC	44.93	55.07
	BLACK NON-HISPANIC	71.63	28.37
	HISPANIC	82.72	17.28
	ASIAN	66.40	33.60
	OTHER/UNKNOWN	70.00	30.00
	TOTAL	47.06	52.94
FEMALE	WHITE NON-HISPANIC	26.46	73.54
	BLACK NON-HISPANIC	53.60	46.40
	HISPANIC	68.24	31.76
	ASIAN	57.79	42.21
	OTHER/UNKNOWN	36.36	73.54
	TOTAL	28.12	71.88
TOTAL	WHITE NON-HISPANIC	34.97	65.03
	BLACK NON-HISPANIC	62.95	37.05
	HISPANIC	76.74	23.26
	ASIAN	62.56	37.44
	OTHER/UNKNOWN	52.38	47.62
	TOTAL	36.95	63.05

## DEATHS BY PLACE OF OCCURRENCE

Between 1998 and 1999, there was little variation in the sites where deaths occurred. The data are presented below:

SITE	% OF DEATHS	% OF DEATHS
	1999	1998
HOSPITAL	47	46.8
NURSING OR REST HOME	30	29.4
AT HOME	21	20.4
EN ROUTE TO HOSPITAL OR DEAD ON ARRIVAL	0.0	0.0
OTHER AND UNKNOWN <sup>1</sup>	2	1.9
TOTAL	100.0	98.5

## DEATHS BY CAUSE

In 1999, the International Classification of Disease, Tenth Revision (ICD-10) replaced the Ninth revision of this coding system. The World Health Organization developed the International Classification of Disease and the United States adopted it in accordance with an international agreement, to promote international comparability in collecting, classifying, and tabulating mortality statistics.

Cause of death statistics in this report are based on the Tenth Revision of the International Classification of Diseases (ICD-10). The methodology of coding cause of death from death certificates is consistent nationally, using the Automated Classification of Medical Entities (ACME), developed by the National Center for Health Statistics (NCHS). The ACME system requires every disease or condition mentioned on the record to be coded. The underlying cause is then selected by a computer program which incorporates the ICD-10 rules and conventions. Cause of death information in this report is based on underlying cause, except where otherwise noted.

The leading causes of death differed markedly by race and ethnicity in 1999, as in previous years. Nine of the ten leading causes of death for whites were chronic conditions (e.g., heart disease, cancer, stroke, respiratory illness, and diabetes) which usually afflict older people. The leading causes of death for Black, non-Hispanics included AIDS/HIV-related diseases and perinatal conditions, which occur more frequently among younger people. For Asians, motor vehicle-related injuries and suicide were among the top ten leading causes of death (although the numbers were low and should be interpreted with caution). For Hispanics, AIDS/HIV-related diseases, perinatal conditions, homicide, "injuries of

# Leading Causes of Death by Race/ Ethnicity, 1999

White			Black			Hispanic			Asian			Total		
Cause	#	%	Cause	#	%	Cause	#	%	Cause	#	%	Cause	#	%
Heart disease <sup>1</sup>	14,804	28.3	Cancer	492	24.4	Cancer	195	20	Cancer	160	35.6	Heart disease	15,539	27.9
Cancer	12,995	24.9	Heart disease	470	23.3	Heart disease	164	16.8	Heart disease	93	20.7	Cancer	13,852	24.8
Stroke	3,385	6.5	Stroke	103	5.1	AIDS/HIV-related diseases	63	6.5	Stroke	33	7.3	Stroke	3,573	6.4
Chronic Lower Resp.	2,773	5.3	Diabetes	80	4	Diabetes	52	5.3	Pneumonia & Influenza	15	3.3	Chronic Lower Resp.	2,857	5.1
Pneumonia & Influenza	2,104	4	Nephritis	73	3.6	Stroke	50	5.1	Diabetes	11	2.4	Pneumonia & Influenza	2,176	3.9
Diabetes	1,182	2.3	Perinatal conditions	56	2.8	Chronic liver disease	34	3.5	Septicemia	10	2.2	Diabetes	1,327	2.4
Alzheimer's Disease	1,108	2.1	AIDS/HIV-related diseases	51	2.5	Injuries of Undetermined Intent <sup>2</sup>	33	3.4	Suicide	9	2	Alzheimer's Disease	1,137	2
Nephritis	998	1.9	Chronic Lower Resp.	50	2.5	Homicide	31	3.2	Nephritis	8	1.8	Nephritis	1,103	2
Septicemia	823	1.6	Septicemia	49	2.4	Perinatal conditions	29	3	Motor Vehicle Injury	8	1.8	Septicemia	894	1.6
Unintentional non-transport Injuries <sup>1</sup>	757	1.4	Pneumonia & Influenza	43	2.1	Motor Vehicle Related Injuries	29	3	Unintentional non-transport Injuries <sup>1</sup>	8	1.8	Unintentional non-transport Injuries <sup>1</sup>	814	1.5
All other causes	11,353	21.7	All other causes	551	27.3	All other causes	295	30.3	All other causes	94	20.9	All other causes	12,491	22.4
Total	52,282	100	Total	2,018	100	Total	975	100.1	Total	449	100	Total	55,763	100

<sup>1</sup> Unintentional Injuries such as falls, fires, and drownings that were not intended to occur.

<sup>2</sup> Injuries such as falls, fires, and drownings where there was not enough information to determine intent.

undetermined intent”, and chronic liver disease were among the leading causes of death in 1999.

#### ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

In 1999, 242 Massachusetts residents died from AIDS and HIV-related illnesses. This represents a 4.8% increase from 1998, but is still the second lowest number of deaths since the peak in 1994.

#### DEATHS CERTIFIED BY MEDICAL EXAMINERS

The total number of deaths certified by medical examiners decreased from 3,931 in 1998 to 3,783 in 1999. Of the deaths certified by medical examiners, 47.5% were reported as a result of natural causes. The percentage of deaths due to natural causes (i.e., non-injury related causes) certified by medical examiners varies somewhat by county, from a high of 73.3% in Dukes County to a low of 40.0% in Nantucket County (although this is based on only 5 deaths so it should be interpreted with caution). Dukes County had the greatest percentage of deaths (26.4%) that were referred to medical examiners, while the highest number of such deaths was in Middlesex County with 2,463 deaths.

#### COMMUNITY HEALTH NETWORK AREAS (CHNA)

The Department of Public Health, in collaboration with health service providers, coalition members, and other interested citizens, has designated 27 geographic areas for community health planning. It is the Department's intention to foster in each of these areas the development of Community Health Networks; consortia of health care providers, human service agencies, schools, churches, youth, parents, elders, advocacy groups, and individual consumers; to address the health needs of the community. These community coalitions will participate in monitoring outcomes and the progress of strategies and responses to those health needs. The data published in this edition reflect the new definitions of CHNAs instituted in January 1997.

A Community Health Network Area (CHNA) is defined as an aggregation of cities and towns. (The city of Boston constitutes its own Community Health Network Area.) It is hoped that the Networks will mobilize around key health issues impacting the community, promote prevention efforts, enhance access to health care, provide opportunities for more collaboration among agencies, and create a client-centered, outcome-oriented health service delivery system. Community Health Networks will also promote efficiency in service delivery by working to reduce duplication and overlap, and by identifying gaps in service.

## DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:

### AGE-ADJUSTED RATE

A procedure for adjusting rates, designed to minimize the effects of differences in age distribution when comparing rates for different populations. This procedure is accomplished by the computational process known as age standardization, whereby mortality statistics are adjusted to a reference population. For this publication, the reference population is the 2000 US projected population, the same as used by the National Center for Health Statistics. The result of the process is a summary index that can be used to compare rates of different populations throughout the nation and over time.

### CAUSE OF DEATH

The disease or injury that initiated the series of events leading to death, or the circumstances of the unintentional or intentional injury that resulted in the death.

### DEATH CERTIFICATE

A vital record signed by a licensed physician that includes cause of death, decedent's name, sex, birth date, place of residence, and place of occurrence.

### INTERNATIONAL CLASSIFICATION OF DISEASES, TENTH REVISION

The International Classification of Disease (ICD) classifies mortality information for statistical purposes. The ICD was first used in 1900 and has since been revised about every 10 years. The Tenth Revision is used to code mortality data beginning with 1999.

### MISER

The Massachusetts Institute for Social and Economic Research. This research institute, located at the University of Massachusetts in Amherst, produces the official population estimates and projections for the Department of Public Health.

### OCCURRENCE DEATH

Occurrence deaths include all deaths that occur within the state, including deaths of non-residents. An interstate exchange agreement among the 50 states and Canada provides for exchanges of copies of birth and death records. These records are used for statistical purposes only, and allow each state or province to track the births and deaths of residents.

## RACE

For death records, race is provided by the death record informant (for example, spouse or next of kin).

## RESIDENT DEATH

The death of a person whose usual place of residence or permanent address (as reported by the informant) is in one of the 351 cities or towns of Massachusetts, regardless of where the death took place. Unless otherwise noted, all data in this publication are resident data. An interstate exchange agreement among the 50 states, Canada, Puerto Rico, Guam, the Virgin Islands, and the District of Columbia provides for exchange of copies of birth and death records. These records are used for statistical purposes only, and allow each state or province to track the births and deaths of residents.

## UNDERLYING CAUSE OF DEATH

The underlying cause of death is: 1.) the disease or injury that initiated the series of events leading to death, or 2.) the circumstances of the unintentional or intentional injury that resulted in the death. See Death Certificate.

## RATES IMPORTANT FOR THIS SECTION INCLUDE:

AGE-SPECIFIC DEATH RATE	$\frac{\text{Number of Resident Deaths in Specific Age Group}}{\text{Total Population of Specific Age Group}} \times 100,000$
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CAUSE-SPECIFIC DEATH RATE	$\frac{\text{Number of Resident Deaths for a Specific Cause}}{\text{Total Population}} \times 100,000$
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CRUDE DEATH RATE	$\frac{\text{Number of Resident Deaths In A Year}}{\text{Total Population}} \times 100,000$
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**Figure C-1. Daily Death Statistics  
Massachusetts: 1999**

Every day in 1999, residents of Massachusetts experienced an average of the following:

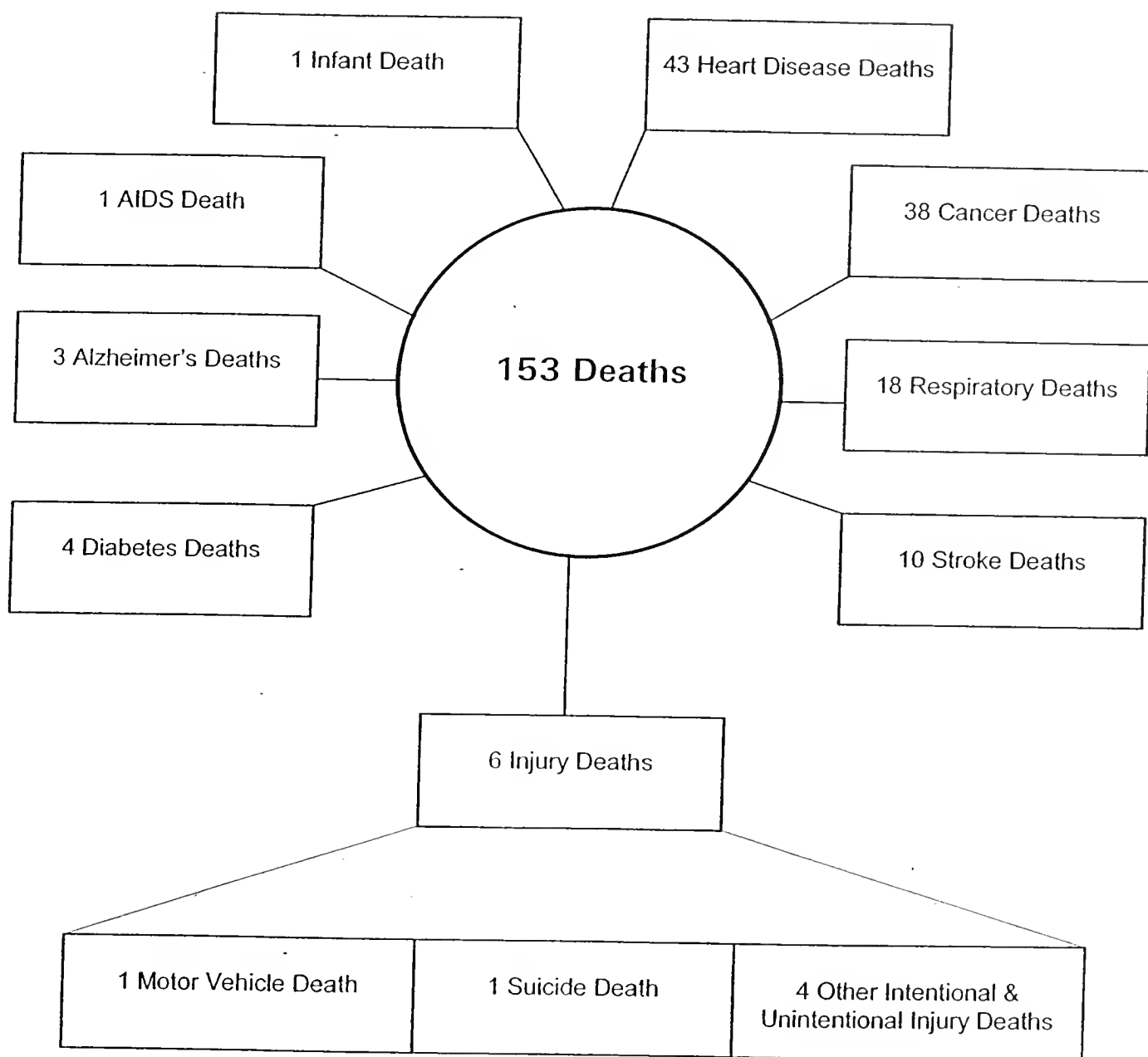


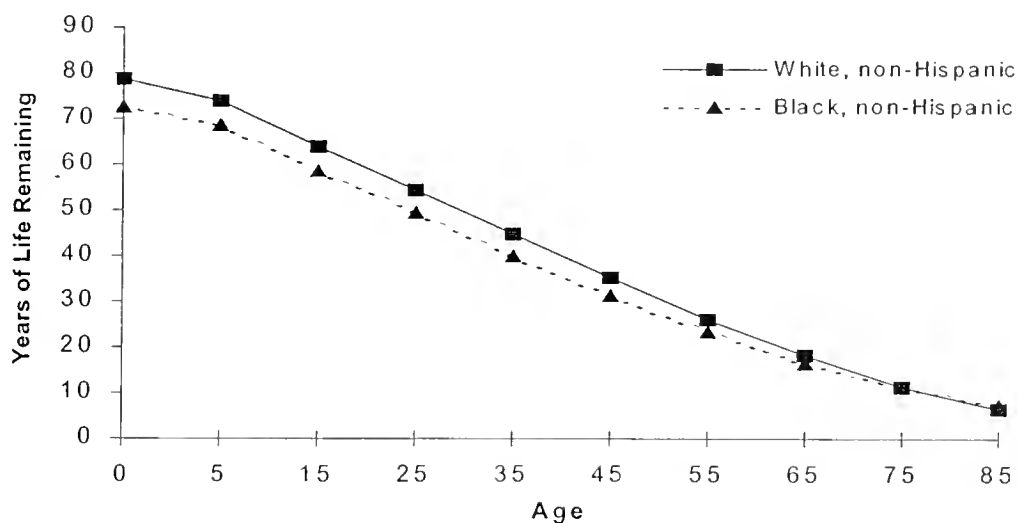
Table C-1. Trends in Mortality Characteristics Massachusetts: 1990 - 1999

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Resident deaths<sup>1</sup></b>										
Number	53,004	53,011	53,805	55,557	54,914	55,296	55,187	54,634	55,204	55,763
Crude rate <sup>2,3,4</sup>	881.0	880.9	891.2	916.2	899.2	900.2	892.4	877.3	877.5	886.4
Age-adjusted rate <sup>5</sup>	878.4	884.2	877.4	885.7	868.2	866.2	853.0	834.8	808.8	815.9
<b>Race/ethnicity of decedent<sup>6,7</sup></b>										
White, non-Hispanic										
Number	50,178	50,142	50,815	52,371	51,600	51,785	51,917	51,398	51,829	52,282
Percent <sup>8</sup>	94.7	94.6	94.4	94.3	94.0	93.7	94.1	94.1	93.9	93.8
Age-adjusted rate	875.7	882.7	875.5	882.8	864.2	860.1	852.2	835.1	808.5	814.2
Black, non-Hispanic										
Number	1,875	1,887	1,958	1,969	2,079	2,136	2,025	2,033	1,969	2,018
Percent	3.5	3.6	3.6	3.5	3.8	3.9	3.7	3.7	3.6	3.6
Age-adjusted rate	1,113.7	1,104.6	1,139.2	1,115.3	1,176.7	1,193.0	1,141.1	1,142.1	1,076.6	1,098.4
Asian/Pacific Islander, non-Hispanic										
Number	294	269	284	360	335	403	398	403	413	449
Percent	0.6	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.8
Age-adjusted rate	570.8	462.7	463.8	613.4	521.2	565.2	534.5	512.0	500.7	511.5
Hispanic										
Number	602	678	713	813	865	936	803	749	924	975
Percent	1.1	1.3	1.3	1.5	1.6	1.7	1.5	1.4	1.7	1.7
Age-adjusted rate	409.9	435.5	440.5	488.5	482.7	504.7	430.0	391.0	463.8	503.1
<b>Gender of decedent<sup>7</sup></b>										
Female										
Number	27,491	27,550	27,770	29,109	28,733	29,262	29,152	29,261	29,568	29,786
Age-adjusted rate	713.6	720.9	711.1	724.5	712.6	717.6	702.7	699.0	678.0	679.9
Male										
Number	25,513	25,461	26,035	26,448	26,181	26,034	26,035	25,373	25,635	25,977
Age-adjusted rate	1,130.3	1,134.1	1,130.2	1,123.5	1,096.9	1,080.6	1,074.0	1,035.0	1,000.8	1,017.3
<b>Age of decedent<sup>7</sup></b>										
<1 year										
Number	651	577	569	523	499	419	403	425	414	418
1-14 years										
Number	205	207	226	239	192	204	197	174	128	165
15-24 years										
Number	586	538	470	464	473	452	434	422	413	407
25-44 years										
Number	2,682	2,912	3,062	3,055	3,210	3,196	2,720	2,348	2,373	2,397
45-64 years										
Number	8,138	7,877	7,973	7,920	7,766	7,611	7,477	7,416	7,501	7,431
65-74 years										
Number	11,707	11,415	11,515	11,509	11,394	10,858	10,711	10,286	10,216	9,782
75-84 years										
Number	15,553	15,506	15,912	16,346	16,092	16,497	16,839	16,884	16,946	17,397
85+ years										
Number	13,482	13,973	14,076	15,494	15,283	16,054	16,400	16,677	17,213	17,765

1. Deaths presented in all tables and figures are resident deaths. 2. Deaths per 100,000 residents. 3. See Section Definitions for further explanation of terms and rates. 4. Rate calculations are based on resident population estimates from MISER for 1991-1995 (released in September 1999), 1996-1997 (released in November 1999), 1998 (released in Sept 2000). Residents death rates for 1998 have been recalculated using 1998 population estimates. 1999 rates are calculated using 1998 population estimates. 5. Rates are age-adjusted per 100,000 residents using the 2000 US standard population. 6. Race categories presented in this report for the years 1990-1999 differ from previously published data. Race and ethnicity data in this table are presented as mutually exclusive categories; persons of Hispanic ethnicity are not included in a race category. 7. Column sum may not equal total because the race, gender or age of some decedents was unknown. 8. Percent of all resident deaths in that year.

Figure C-2

**Expected Years of Life Remaining at Different Ages by Race,  
Massachusetts: 1999**



**Years of Life Remaining<sup>1</sup>, Massachusetts: 1999**

At Age:	All	Females	White, non-Hispanic Females	Black, non-Hispanic Females	Males	White, non-Hispanic Males	Black, non-Hispanic Males
Birth	78.4	81.0	81.1	75.9	75.7	75.9	69.1
1 year old	77.8	80.4	80.5	75.9	75.1	75.3	69.0
5 years old	73.9	76.4	76.5	72.1	71.2	71.4	65.1
15 years old	64.0	66.4	66.5	62.3	61.2	61.4	55.1
25 years old	54.3	56.6	56.7	52.5	51.6	51.7	46.1
35 years old	44.6	46.9	46.9	42.9	42.0	42.1	36.9
45 years old	35.3	37.3	37.3	34.0	32.8	32.8	28.5
55 years old	26.3	28.2	28.1	25.4	24.1	24.0	21.0
65 years old	18.3	19.9	19.8	18.0	16.3	16.2	14.7
75 years old	11.5	12.5	12.4	12.1	10.0	9.8	9.9
85 years old	6.8	7.2	7.0	7.2	5.9	5.7	7.0

1. Years of Life Remaining calculated using the Greville Abridged Life Table Method. (source: Dublin LI. Length of Life - A Study of the Life Table. Ronald Press Co. New York, 1949.) 1998 MISER population estimates (released September 2000) are used as the denominator.

**Table C-2. Five Leading Causes of Death<sup>1</sup> Comparability Unmodified and Comparability Modified Age-Adjusted Rates  
Massachusetts and United States: 1990-1999**

Year <sup>2</sup>	<u>Heart Disease</u>			<u>Cancer</u>			<u>Stroke</u>		
	<u>MA</u>		<u>US</u>	<u>MA</u>		<u>US</u>	<u>MA</u>		<u>US</u>
	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified <sup>3</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified <sup>3</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Modified <sup>4</sup>
Rate <sup>5</sup>	294.6	NA <sup>6</sup>	325.9	221.5	NA	213.9	55.0	NA	65.5
% of Total	33.4		33.9	25.3		23.3	6.2		6.7
Rate	286.0	NA	317.9	230.0	NA	213.7	54.7	NA	63.4
% of Total	32.2		33.7	26.0		23.5	6.2		6.6
Rate	277.4	NA	310.5	234.2	NA	212.3	53.7	NA	62.1
% of Total	31.7		33.5	26.3		23.7	6.2		6.6
Rate	278.3	NA	314.6	228.1	NA	212.5	52.8	NA	63.2
% of Total	31.7		33.3	25.2		23.1	6.1		6.6
Rate	265.3	261.5	304.5	224.7	226.3	211.0	51.7	54.7	60.1
% of Total	30.8		32.7	25.3		23.2	6.1		6.7
Rate	259.4	255.7	301.3	225.6	227.2	209.6	52.9	55.9	61.3
% of Total	30.2		32.4	25.4		23.1	6.3		6.8
Rate	257.1	253.4	293.4	221.2	222.7	206.7	50.5	53.4	61.0
% of Total	30.4		32.2	25.2		23.1	6.1		6.9
Rate	249.0	245.5	285.7	215.4	216.8	203.7	50.6	53.5	60.1
% of Total	30.2		32.0	25.0		23.1	6.2		6.9
Rate	231.0	227.7	272.4	209.0	210.4	202.4	47.1	49.7	59.5
% of Total	29.0		31.6	25.0		23.0	6.0		6.8
Rate	223.8 <sup>7</sup>		267.7 <sup>8</sup>	209.5 <sup>7</sup>		202.6 <sup>8</sup>	50.5 <sup>7</sup>		61.8 <sup>8</sup>
% of Total	27.9		30.3	24.8		23.0	6.4		7.0

\* Please note this table was updated June 2001 to reflect the release of 1999 death data for the US. 1. Cause of death; the disease or injury that initiated the events leading to death; or the circumstances of the unintentional or intentional injury that resulted in the death. 2. 1990-1998 data coded according to ICD-9. 1999 data coded according to ICD-10. ICD-10 codes used in this publication are listed on page 121. 3. Comparability unmodified rate: this rate has not been modified. 4. Comparability Modified Rate: this rate is adjusted using the preliminary comparability ratio (CR) from NCHS, February 2001. 5. All rates are age-adjusted per 100,000 residents using the 2000 US standard population. US data for years 1990-1998 obtained from Compressed Mortality File on CDC Wonder, February 2001. 6. NA: comparability ratio is not applicable for years prior to 1994. 7. When comparing data over time between 1994 through 1999, please use the comparability modified rates for years 1994-1998. 8. US data for 1999 obtained from NCHS. Deaths: Preliminary Data for 1999, National Vital Statistics Report, Vol. 49, No. 3, June 26, 2001.

Table C-2<sup>2</sup> (continued). Five Leading Causes of Death<sup>1</sup> Comparability Unmodified and Comparability Modified Age-Adjusted Rates, Massachusetts and United States: 1990-1999

Year <sup>2</sup>	Influenza/Pneumonia				Unintentional Injuries				All Causes	
	MA		US		MA		US		MA	US
	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>		
1990	Rate <sup>5</sup> 38.9 % of Total 4.4	NA <sup>6</sup>	35.8 3.6	NA	24.8 2.9	NA	37.5 4.3	NA	878.4	938.0
1991	Rate 40.1 % of Total 4.5	NA	34.4 3.5	NA	23.1 2.7	NA	36.0 4.1	NA	884.2	925.2
1992	Rate 38.5 % of Total 4.5	NA	32.7 3.4	NA	20.6 2.4	NA	34.6 4.0	NA	877.4	910.7
1993	Rate 42.9 % of Total 5.0	NA	34.8 3.6	NA	21.3 2.4	NA	35.7 4.0	NA	885.7	931.3
1994	Rate 40.4 % of Total 4.8	28.2	33.4 3.5	23.3	20.7 2.4	20.6	35.7 4.0	35.1	868.2	920.0
1995	Rate 41.2 % of Total 4.9	28.7	33.5 3.6	23.4	18.8 2.2	18.8	36.0 4.0	35.4	866.2	918.4
1996	Rate 41.5 % of Total 5.1	29.0	32.9 3.6	23.0	19.5 2.3	19.5	36.2 4.1	35.6	853.0	902.1
1997	Rate 39.1 % of Total 4.9	27.3	33.3 3.7	23.3	19.7 2.3	19.7	36.0 4.1	35.3	834.8	887.0
1998	Rate 40.2 % of Total 5.2	28.1	34.6 3.9	24.2	19.9 2.4	19.8	35.0 4.2	36.1	808.8	875.4
1999	Rate 30.3 <sup>7</sup> % of Total 3.9		23.5 <sup>8</sup> 2.7		19.4 <sup>7</sup> 2.3		35.7 <sup>8</sup> 4.1		815.9	881.9

1. Cause of death: the disease or injury that initiated the events leading to death; or the circumstances of the unintentional or intentional injury that resulted in the death. 2. 1990-1998 data coded according to ICD-9. 1999 data coded according to ICD-10. ICD-9 and ICD-10 codes used in this publication are listed on page 121. 3. Comparability unmodified rate. 4. Comparability Modified Rate: this rate is adjusted using the preliminary comparability ratio (CR) from NCHS, February 2001. 5. All rates are age-adjusted per 100,000 residents using the 2000 US standard population. US data for years 1990-1998 obtained from Compressed Mortality File on CDC Wonder, February 2001. 6. NA: comparability ratio is not applicable for years prior to 1994. 7. When comparing data over time between 1994 through 1999, please use the comparability modified rate for years 1994-1998. 8. US data for 1999 obtained from NCHS. Deaths: Preliminary Data for 1999. National Vital Statistics Report, Vol. 49, No. 3, June 26, 2001.

**Table C-3. Leading Causes of Death, Numbers and Age-Specific Rates, Massachusetts: 1999**

Age	Cause of death <sup>1</sup>	Deaths	
		Number	Rate <sup>2</sup>
1 – 14 years	<b>TOTAL</b>	<b>165</b>	<b>14.6</b>
	Cancer	30	2.7
	Unintentional non-transport injuries <sup>3</sup>	20	1.8
	Congenital malformations	17	1.5
	Motor vehicle-related injuries	14	1.2
15 - 24 years	<b>TOTAL</b>	<b>407</b>	<b>46.0</b>
	Motor vehicle-related injuries	107	12.1
	Suicide	45	5.1
	Injuries of undetermined intent <sup>4</sup>	44	5.0
	Homicide	40	4.5
25 – 44 years	<b>TOTAL</b>	<b>2,397</b>	<b>118.4</b>
	Cancer	461	22.8
	Heart Disease	320	15.8
	Injuries of undetermined intent <sup>4</sup>	277	13.7
	Suicide	189	9.3
45 – 64 years	<b>TOTAL</b>	<b>7,431</b>	<b>565.4</b>
	Cancer	2,951	224.5
	Heart Disease	1,708	130.0
	Chronic Liver Disease	249	18.9
	Chronic Lower Respiratory Disease <sup>5</sup>	246	18.7
65 + years <sup>6</sup>	<b>TOTAL</b>	<b>44,944</b>	<b>5,214.0</b>
	Heart Disease	13,476	1,563.4
	Cancer	10,377	1,203.8
	Stroke	3,321	385.3
	Chronic Lower Respiratory Disease <sup>5</sup>	2,579	299.2

1. Cause of Death classified using ICD-10. See page 121 for ICD-10 codes. 2. Number of deaths per 100,000 residents in each age group.

3. Unintentional non-transport injuries include injuries such as falls, fires, and drownings that were not intended to occur. Motor vehicle-related injuries and other transportation-related injuries are not included in these numbers. 4. Injuries of undetermined intent include deaths from drug overdoses, falls, and fires where the investigation has not determined whether the injuries were unintentional or purposely inflicted.

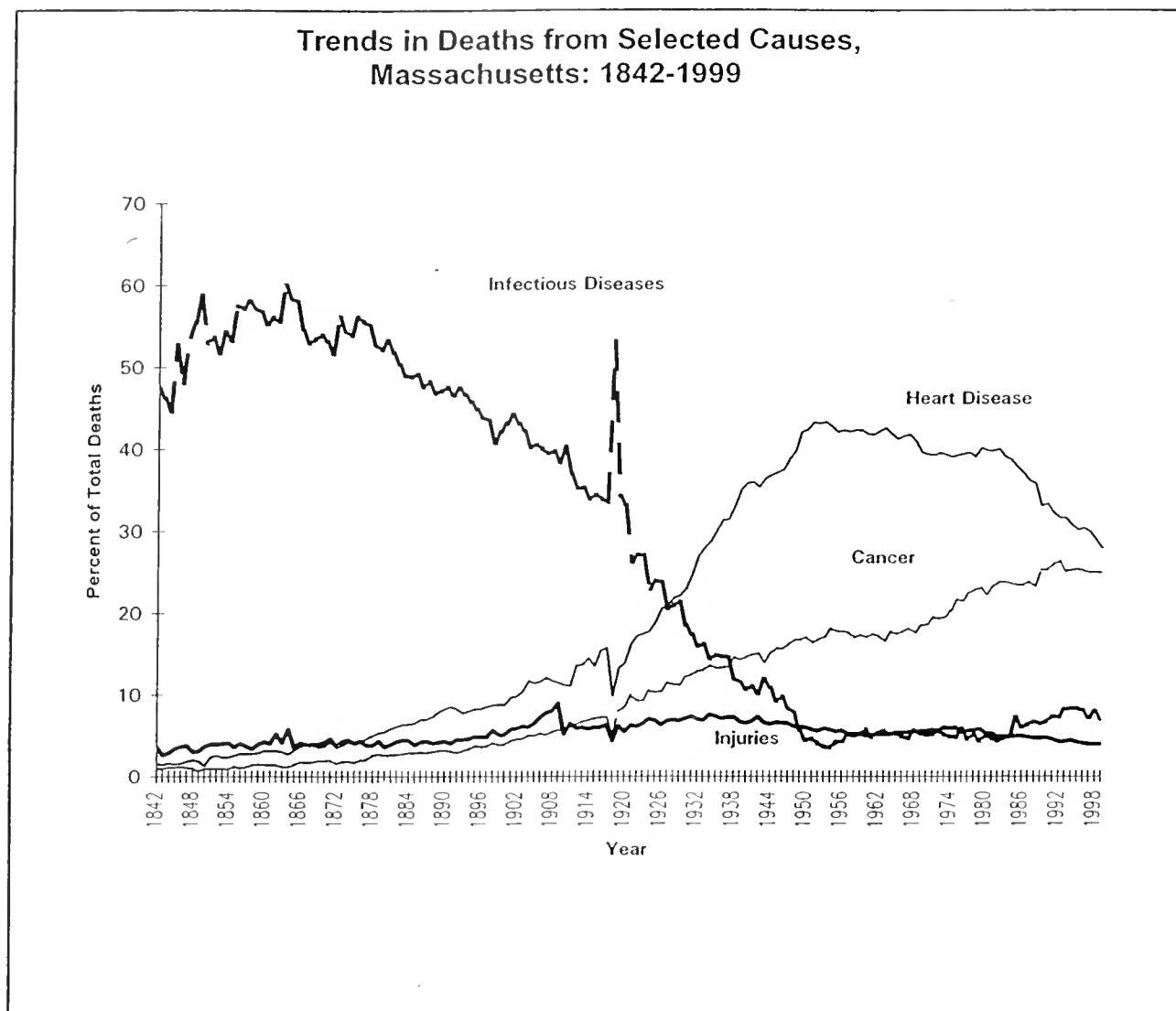
5. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 6. See Table C-3b for leading causes of death for detailed age groups for persons ages 65+ years.

**Table C-3b. Leading Causes of Death Among the Oldest Age Groups,  
Numbers and Age-Specific Rates, Massachusetts: 1999**

Age	Cause of death <sup>1</sup>	Deaths	
		Number	Rate <sup>2</sup>
65-74 years	<b>TOTAL</b>	<b>9,782</b>	<b>2,213.1</b>
	Cancer	3,658	827.6
	Heart Disease	2,434	550.7
	Chronic Lower Respiratory Disease <sup>3</sup>	684	154.8
	Stroke	400	90.5
75-84 years	<b>TOTAL</b>	<b>17,397</b>	<b>5,809.0</b>
	Heart Disease	4,933	1,647.2
	Cancer	4,464	1,490.6
	Stroke	1,284	428.7
	Chronic Lower Respiratory Disease <sup>3</sup>	1,135	379.0
85+ years	<b>TOTAL</b>	<b>17,765</b>	<b>14,742.6</b>
	Heart Disease	6,109	5,069.7
	Cancer	2,255	1,871.4
	Stroke	1,637	1,358.5
	Influenza and Pneumonia	1,183	981.7

1. Cause of Death classified according to ICD-10. See page 121 for ICD-10 codes. 2. Number of deaths per 100,000 residents in each age group. 3. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title).

Figure C-3





**Table C-4. Leading Causes of Death<sup>1</sup> and Age-Adjusted Death Rates by Race and Hispanic Ethnicity, Massachusetts: 1999**

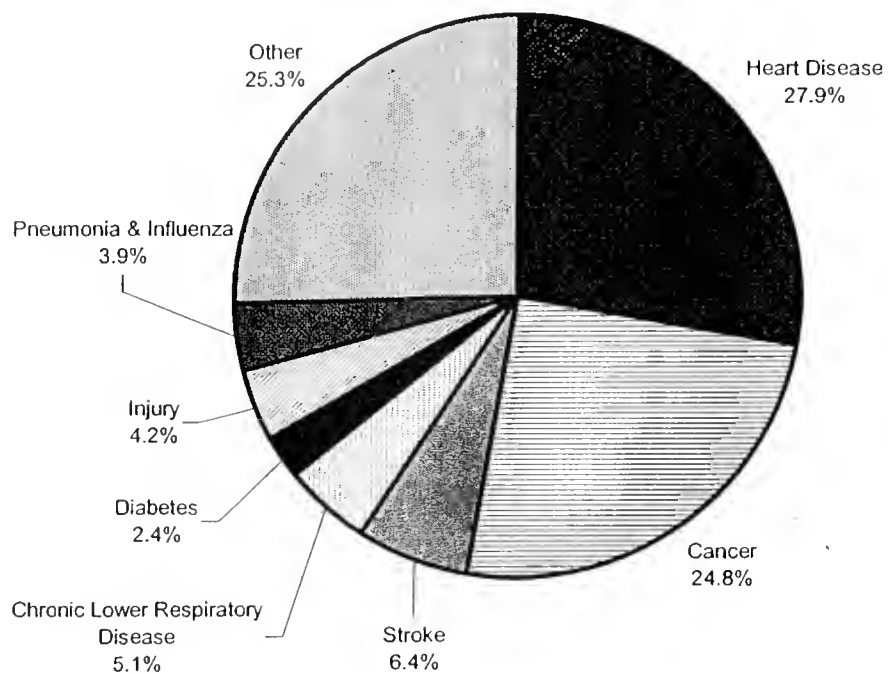
<u>White, non-Hispanic<sup>2</sup></u>			<u>Black, non-Hispanic<sup>2</sup></u>			<u>Asian/Pacific Islander, non-Hispanic<sup>2</sup></u>			<u>Hispanic</u>		
Cause <sup>3</sup>	#	Rate <sup>4</sup>	Cause	#	Rate	Cause	#	Rate	Cause	#	Rate
Total	52,282	814.2	Total	2,018	1,098.4	Total	449	511.5	Total	975	503.1
Heart disease	14,804	225.8	Cancer	492	280.2	Cancer	160	167.5	Cancer	195	113.2
Cancer	12,995	209.9	Heart Disease	470	273.1	Heart Disease	93	113.8	Heart Disease	164	103.8
Stroke	3,385	50.5	Stroke	103	62.9	Stroke	33	45.5	HIV Disease	63	22.5
Chronic Lower Resp. Disease <sup>5</sup>	2,773	43.0	Diabetes	80	47.1	Influenza and Pneumonia	15	21.7	Diabetes	52	34.8
Influenza and Pneumonia	2,104	30.9	Nephritis	73	41.7	Diabetes	11	13.9	Stroke	50	31.7
Diabetes	1,182	18.7	Perinatal Conditions	56	14.2	Septicemia	10	12.0	Chronic Liver Disease	34	18.2
Alzheimer's Disease	1,108	16.1	HIV Disease	51	19.4	Suicide	9	4.5	Injuries of Undetermined Intent	33	9.3
Nephritis	998	15.2	Chronic Lower Resp. Disease <sup>5</sup>	50	28.9	Nephritis	8	12.1	Homicide	31	7.4
Septicemia	823	12.8	Septicemia	49	28.0	Motor Vehicle related injuries	8	5.4	Perinatal Conditions	29	4.7
Unintentional non-transport injuries <sup>6</sup>	757	12.0	Influenza and Pneumonia	43	24.7	Unintentional non-transport injuries <sup>6</sup>	8	7.4	Motor Vehicle-related Injuries	29	8.3

**Total**

<u>Cause</u>	<u>#</u>	<u>Rate</u>
Total	55,763	815.9
Heart disease	15,539	223.8
Cancer	13,852	209.5
Stroke	3,573	50.5
Chronic Lower Respiratory Disease <sup>5</sup>	2,857	41.8
Influenza and Pneumonia	2,176	30.3
Diabetes	1,327	19.8
Alzheimer's Disease	1,137	15.7
Nephritis	1,103	15.9
Septicemia	894	13.1
Unintentional non-transport injuries <sup>6</sup>	814	12.0

1. Ranking based on number of deaths. 2. Race categories presented in this report differ from previously published data. Race and ethnicity data in this table are presented as mutually exclusive categories; persons of Hispanic ethnicity are not included in a race category. 3. Underlying Cause of Death based on ICD-10 (Please refer to page 121 for list of ICD-10 codes used). 4. All rates are age-adjusted per 100,000 residents using the 2000 US standard population. 5. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 6. Unintentional injuries such as falls, fires, and drownings that were not intended to occur. Motor-vehicle-related injuries and other transportation-related injuries are not included in these numbers.

**Figure C-4. Distribution of Leading Causes of Death<sup>1</sup>**  
**Massachusetts: 1999**



<sup>1</sup>Total Number of Deaths = 55,763

Causes of Death are classified according to ICD-10

**Table C-5. Number and Age-Specific Rates for Selected Causes of Death by Race and Hispanic Ethnicity, Massachusetts: 1999**

Selected Causes <sup>2</sup>	<u>Total</u>		<u>White, non-Hispanic<sup>1</sup></u>		<u>Black, non-Hispanic<sup>1</sup></u>		<u>Asian/Pacific Islander, non-Hispanic<sup>1</sup></u>		<u>Hispanic</u>	
	#	Rate <sup>3</sup>	#	Rate	#	Rate	#	Rate	#	Rate
<b>Age: 1-14, TOTAL</b>	<b>165</b>	<b>14.6</b>	<b>113</b>	<b>12.4</b>	<b>19</b>	<b>27.4</b>	<b>9</b>	<b>22.6</b>	<b>22</b>	<b>21.1</b>
Cancer	30	2.7	20	2.2	1	-- <sup>5</sup>	1	-- <sup>5</sup>	7	6.7
Unintentional non-transport Injuries <sup>4</sup>	20	1.8	12	1.3	3	-- <sup>5</sup>	2	-- <sup>5</sup>	3	-- <sup>5</sup>
Congenital Malformations	17	1.5	12	1.3	3	-- <sup>5</sup>	1	-- <sup>5</sup>	0	0.0
Motor Vehicle-related Injuries	14	1.2	10	1.1	1	-- <sup>5</sup>	0	0.0	3	-- <sup>5</sup>
<b>Age: 15-24, TOTAL</b>	<b>407</b>	<b>46.0</b>	<b>288</b>	<b>38.7</b>	<b>54</b>	<b>116.5</b>	<b>14</b>	<b>46.0</b>	<b>51</b>	<b>83.3</b>
Motor Vehicle-related Injuries	107	12.1	82	11.0	12	25.9	3	-- <sup>5</sup>	10	16.3
Suicide	45	5.1	32	4.3	6	12.9	1	-- <sup>5</sup>	6	9.8
Injuries of Undetermined Intent <sup>6</sup>	44	5.0	40	5.4	0	0.0	0	0.0	4	-- <sup>5</sup>
Homicide	40	4.5	10	1.3	17	36.7	0	0.0	13	21.2
<b>Age: 25-44, TOTAL</b>	<b>2,397</b>	<b>118.4</b>	<b>1,901</b>	<b>109.0</b>	<b>241</b>	<b>258.0</b>	<b>47</b>	<b>72.0</b>	<b>205</b>	<b>173.7</b>
Cancer	461	22.8	394	22.6	29	31.1	17	26.0	21	17.8
Heart Disease	320	15.8	259	14.9	37	39.6	8	12.3	16	13.6
Injuries of Undetermined Intent <sup>6</sup>	277	13.7	238	13.6	16	17.1	0	0.0	23	19.5
Suicide	189	9.3	167	9.6	4	-- <sup>5</sup>	7	10.7	10	8.5
<b>Age: 45-64, TOTAL</b>	<b>7,431</b>	<b>565.4</b>	<b>6,582</b>	<b>551.1</b>	<b>475</b>	<b>1,055.2</b>	<b>102</b>	<b>360.3</b>	<b>265</b>	<b>606.4</b>
Cancer	2,951	224.5	2,664	223.0	155	344.3	59	208.4	71	162.5
Heart Disease	1,708	130.0	1,522	127.4	117	259.9	18	63.6	51	116.7
Chronic Liver Disease	249	18.9	218	18.3	7	15.6	2	-- <sup>5</sup>	21	48.1
Chronic Lower Respiratory Disease <sup>7</sup>	246	18.7	236	19.8	8	17.8	1	-- <sup>5</sup>	1	-- <sup>5</sup>
<b>Age: 65+, TOTAL<sup>8</sup></b>	<b>44,944</b>	<b>5,214.0</b>	<b>43,112</b>	<b>5,299.8</b>	<b>1,154</b>	<b>5,577.0</b>	<b>269</b>	<b>2,794.2</b>	<b>383</b>	<b>2,258.1</b>
Heart Disease	13,476	1,563.4	12,995	1,597.5	312	1,507.8	66	685.6	96	566.0
Cancer	10,377	1,203.8	9,895	1,216.4	306	1,478.8	79	820.6	90	530.6
Stroke	3,321	385.3	3,177	390.6	81	391.5	29	301.2	32	188.7
Chronic Lower Respiratory Disease <sup>7</sup>	2,579	299.2	2,519	309.7	36	174.0	4	-- <sup>5</sup>	20	117.9

1. Race categories presented in this report differ from previously published data. Race and ethnicity data in this table are presented as mutually exclusive categories; persons of Hispanic ethnicity are not included in a race category. 2. Deaths are coded according to ICD-10. Please see page 121 for a list of ICD-10 codes used in this table. 3. Number of deaths per 100,000 persons in each age group. 4. Unintentional non-transport injuries include injuries such as falls, fires, and drownings that were not intended to occur. Motor vehicle-related injuries and other transportation-related injuries are not included in these numbers. 5. Calculations based on fewer than five events are excluded. 6. Injuries of undetermined intent include deaths from falls, fires, drownings, and drug overdoses, where the investigation has not determined whether the injuries were accidental or purposely inflicted. 7. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 8. Please see Table C-5b for causes of death for detailed age groups for persons ages 65+ years.

Table C-5b. Number and Age-Specific Rates for Selected Causes of Death Among the Oldest Age Groups  
by Race and Hispanic Ethnicity, Massachusetts: 1999

Selected Causes <sup>2</sup>	Total		White, non-Hispanic <sup>1</sup>		Black, non-Hispanic <sup>1</sup>		Asian/Pacific Islander, non-Hispanic <sup>1</sup>		Hispanic	
	#	Rate <sup>3</sup>	#	Rate	#	Rate	#	Rate	#	Rate
Age: 65-74, TOTAL	9,782	2,213.1	9,112	2,199.9	406	3,424.1	101	1,690.9	156	1,690.9
Cancer	3,658	827.6	3,428	827.6	143	1,206.0	41	686.4	44	476.9
Heart Disease	2,434	550.7	2,266	547.1	101	851.8	28	468.8	35	379.4
Chronic Lower Respiratory Disease <sup>4</sup>	684	154.8	659	159.1	15	126.5	1	-- <sup>5</sup>	9	97.6
Stroke	400	90.5	364	87.9	18	151.8	9	150.7	9	97.6
Age: 75-84, TOTAL	17,397	5,809.0	16,728	5,876.6	426	6,528.7	98	3,581.9	133	2,554.3
Heart Disease	4,933	1,647.2	4,772	1,676.4	103	1,578.5	17	621.3	38	729.8
Cancer	4,464	1,490.6	4,295	1,508.9	110	1,685.8	28	1,023.4	28	537.7
Stroke	1,284	428.7	1,217	427.5	41	628.4	13	475.1	12	230.5
Chronic Lower Respiratory Disease <sup>4</sup>	1,135	379.0	1,111	390.3	17	260.5	1	-- <sup>5</sup>	6	115.2
Age: 85+, TOTAL	17,765	14,742.6	17,272	15,071.4	322	13,939.4	70	7,625.3	94	3,718.4
Heart Disease	6,109	5,069.7	5,957	5,198.0	108	4,675.3	21	2,287.6	23	909.8
Cancer	2,255	1,871.4	2,172	1,895.3	53	2,294.4	10	1,089.3	18	712.0
Stroke	1,637	1,358.5	1,596	1,392.7	22	952.4	7	762.5	11	435.1
Influenza and Pneumonia	1,183	981.7	1,161	1,013.1	14	606.1	3	-- <sup>5</sup>	5	197.8

1 Race categories presented in this report differ from previously published data. Race and ethnicity data in this table are presented as mutually exclusive categories; persons of Hispanic ethnicity are not included in a race category. 2. Deaths are coded according to ICD-10. Please see page 121 for a list of ICD-10 codes used in this table. 3. Number of deaths per 100,000 persons in each age group. 4. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 5. Calculations based on fewer than five events are excluded.

**Table C-6. Heart Disease and Cancer Deaths by Race and Gender,  
Comparability Unmodified and Comparability Modified Age-Adjusted Rates,<sup>1</sup> Massachusetts: 1990, 1995-1999**

**Heart Disease**

Year	<u>White, non-Hispanic<sup>2</sup></u>				<u>Black, non-Hispanic<sup>2</sup></u>			
	<u>Male</u>		<u>Female</u>		<u>Male</u>		<u>Female</u>	
	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified	Comparability Modified	Comparability Unmodified	Comparability Modified	Comparability Unmodified	Comparability Modified
1990	357.4	NA <sup>5</sup>	223.7	NA	398.4	NA	226.8	NA
1995	338.0	333.2	208.9	205.9	333.4	328.7	246.1	242.6
1996	337.0	332.2	207.0	204.1	340.0	335.2	234.4	231.1
1997	323.5	318.9	202.3	199.4	356.3	351.2	238.5	235.1
1998	300.0	295.7	186.6	184.0	357.2	352.1	242.8	239.4
1999 <sup>6</sup>	294.7 <sup>7</sup>		178.5 <sup>7</sup>		329.8 <sup>7</sup>		230.8 <sup>7</sup>	
				225.8 <sup>7</sup>				273.1 <sup>7</sup>

Year	<u>Asian/Pacific Islander, non-Hispanic<sup>2</sup></u>				<u>Hispanic</u>			
	<u>Male</u>		<u>Female</u>		<u>Male</u>		<u>Female</u>	
	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified	Comparability Modified	Comparability Unmodified	Comparability Modified	Comparability Unmodified	Comparability Modified
1990	111.6	NA <sup>5</sup>	86.7	NA	100.2	NA	77.8	NA
1995	120.8	119.1	97.9	96.5	130.9	129.0	79.5	78.4
1996	153.9	151.7	86.9	85.7	135.9	134.0	78.9	77.8
1997	150.4	148.3	67.7	66.7	132.7	130.8	78.7	77.6
1998	150.6	148.5	98.5	97.1	114.0	112.4	71.3	70.3
1999 <sup>6</sup>	144.8 <sup>7</sup>		87.9 <sup>7</sup>		137.8 <sup>7</sup>		80.3 <sup>7</sup>	
				113.8 <sup>7</sup>				104.3 <sup>7</sup>

1. Rates are per 100,000 age-adjusted to the 2000 US standard population. 2. Race categories presented in this report differ from previously published data. Race and ethnicity data in this table are presented as mutually exclusive categories; persons of Hispanic ethnicity are not included in a race category. 3. Comparability unmodified rate: this rate has not been modified. 4. Comparability modified rate: this rate has been adjusted using the preliminary comparability ratio (CR) provided by the NCHS (February 2001). 5. NA: comparability ratio is not applicable for years prior to 1994. 6. 1999 are coded according to ICD-10. 7. When comparing data over time between 1994 through 1999, please use the comparability modified rate for years 1994-1999.

**Table C-6 (continued). Heart Disease and Cancer Deaths by Race and Gender,  
Comparability Unmodified and Comparability Modified Age-Adjusted Rates,<sup>1</sup> Massachusetts: 1990, 1995-1999**

**Cancer**

Year	<u>White, non-Hispanic<sup>2</sup></u>			<u>Black, non-Hispanic<sup>2</sup></u>		
	Male		Total	Male		Total
	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>		Comparability Unmodified	Comparability Modified	
1990	273.9	NA <sup>5</sup>	220.5	308.1	NA	233.4
1995	286.1	288.0	226.5	394.0	396.7	303.8
1996	283.8	285.7	222.5	361.6	364.1	293.9
1997	269.5	271.3	216.9	396.2	398.9	299.1
1998	264.1	265.9	210.0	380.2	382.8	280.1
1999 <sup>6</sup>	267.8 <sup>7</sup>	175.6 <sup>7</sup>	209.9 <sup>7</sup>	377.0 <sup>7</sup>	217.5 <sup>7</sup>	280.2 <sup>7</sup>
Year	<u>Asian/Pacific Islander, non-Hispanic<sup>2</sup></u>			<u>Hispanic</u>		
	Male		Total	Male		Total
	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>		Comparability Unmodified	Comparability Modified	
1990	126.3	NA	96.3	64.7	NA	57.3
1995	198.6	200.0	179.2	121.5	122.3	99.4
1996	192.7	194.0	172.6	136.5	137.4	90.0
1997	185.1	186.4	156.7	107.7	108.4	75.8
1998	143.5	144.5	120.2	160.2	161.3	117.2
1999 <sup>6</sup>	199.6 <sup>7</sup>	144.0 <sup>7</sup>	167.5 <sup>7</sup>	141.2 <sup>7</sup>	91.6 <sup>7</sup>	113.2 <sup>7</sup>

1. Rates are per 100,000 age-adjusted to the 2000 US standard population. 2. Race categories presented in this report differ from previously published data. Race and ethnicity data in this table are presented as mutually exclusive categories; persons of Hispanic ethnicity are not included in a race category. 3. Comparability unmodified rate; this rate has not been modified. 4. Comparability modified rate; this rate has been adjusted using the preliminary comparability ratio (CR) provided by the NCHS (February 2001). 5. NA; comparability ratio is not applicable for years prior to 1994. 6. 1999 are coded according to ICD-10. 7. When comparing data over time between 1994 through 1999, please use the comparability modified rate for years 1994-1999.

**Table C-7. Number and Age-Adjusted Rates of Cancer Deaths by  
Selected Causes and Gender, Massachusetts: 1999**

Cause of Death <sup>1</sup>	ICD-10 Code	Total		Female		Male	
		#	Rate <sup>2,3</sup>	#	Rate	#	Rate
<b>Total Cancer Deaths</b>	<b>C00-C97</b>	<b>13,852</b>	<b>209.5</b>	<b>6,852</b>	<b>174.6</b>	<b>7,000</b>	<b>267.4</b>
Bladder	C67	349	5.1	111	2.7	238	9.7
Brain and nervous system	C70-C72	304	4.8	137	3.8	167	5.9
Cervix	C53	64	1.8	64	1.8	-- <sup>4</sup>	-- <sup>4</sup>
Colorectal	C18-C21	1,527	22.6	802	19.0	725	28.0
Esophagus	C15	350	5.4	77	1.9	273	10.1
Female breast	C50 <sup>5</sup>	1,048	27.8	1,048	27.8	-- <sup>4</sup>	-- <sup>4</sup>
Hodgkin's disease	C81	49	0.8	22	0.7	27	0.9
Kidney and other urinary organs	C64, C65	270	4.1	121	3.1	149	5.6
Leukemia	C91-C95	524	7.9	252	6.3	272	10.3
Lung	C33, C34	3,592	55.0	1,586	41.7	2,006	75.0
Melanoma of the skin	C43	181	2.8	70	1.8	111	4.1
Multiple myeloma	C88, C90	252	3.8	126	3.2	126	4.8
Non-Hodgkin's lymphoma	C82-C85	590	8.9	300	7.5	290	10.9
Ovary	C56	334	8.9	334	8.9	-- <sup>4</sup>	-- <sup>4</sup>
Pancreas	C25	745	11.3	405	10.0	340	12.9
Prostate	C61	801	33.4	-- <sup>4</sup>	-- <sup>4</sup>	801	33.4
Stomach	C16	332	5.0	143	3.5	189	7.3
Uterus	C54, C55	161	4.1	161	4.1	-- <sup>4</sup>	-- <sup>4</sup>
All other cancers	Residual	1,803	27.0	913	22.4	890	34.0

1. Common terms are used to describe the causes of cancer deaths. For detailed terminology of cancer sites, please refer to ICD-10 code list on page 121. 2. All rates are age-adjusted by the direct method using the 2000 US standard population. Rates are per 100,000 population. PLEASE NOTE: the age-adjusted cancer mortality rates presented in this report cannot be compared to those published by the Massachusetts Cancer Registry (MCR). Age-adjusted rates published in this report are adjusted to the 2000 US standard population, consistent with the National Center for Health Statistics tabulation procedures. The MCR publishes age-adjusted cancer mortality rates adjusted to the 1970 US standard population for consistency with procedures used by the National Cancer Institute. 3. The total resident population is used to calculate all "Total Rates" except for ICD-10 C50, C53-C56, which are based on the total female population, and ICD-10 C61, which is based on the total male population. 4. Calculations based on fewer than five events are excluded. 5. Includes only female breast cancer.

**Table C-8. Selected Causes of Cancer Deaths by Age, Massachusetts: 1999**

Age	Cause of death <sup>1</sup>	ICD-10 Code	Number	Age-specific rate <sup>2</sup>
1 – 14 years	<b>TOTAL</b>		<b>30</b>	<b>2.7</b>
	Brain and nervous system	C70-C72	10	0.9
	Leukemia	C91-C95	9	0.8
	Kidney and other urinary organs	C64, C65	1	— <sup>3</sup>
	Non-Hodgkin's lymphoma	C82-C85	1	— <sup>3</sup>
15 - 24 years	<b>TOTAL</b>		<b>31</b>	<b>3.5</b>
	Leukemia	C91-C95	7	0.8
	Brain and nervous system	C70-C72	4	— <sup>3</sup>
	Non-Hodgkin's lymphoma	C82-C85	4	— <sup>3</sup>
	Hodgkin's disease	C81	2	— <sup>3</sup>
25 – 44 years	<b>TOTAL</b>		<b>461</b>	<b>22.8</b>
	Lung	C33, C34	71	3.5
	Female breast	C50	61	6.0 <sup>4</sup>
	Brain and nervous system	C70-C72	43	2.1
	Colorectal	C18-C21	35	1.7
45 – 64 years	<b>TOTAL</b>		<b>2,951</b>	<b>224.5</b>
	Lung	C33, C34	819	62.3
	Female breast	C50	320	47.1 <sup>4</sup>
	Colorectal	C18-C21	232	17.7
	Pancreas	C25	167	12.7
65 + years	<b>TOTAL</b>		<b>10,377</b>	<b>1,203.8</b>
	Lung	C33, C34	2,701	313.3
	Colorectal	C18-C21	1,259	146.1
	Prostate	C61	769	227.2 <sup>5</sup>
	Female breast	C50	667	127.4 <sup>4</sup>
65-74 years	<b>TOTAL</b>		<b>3,658</b>	<b>827.6</b>
	Lung	C33, C34	1,212	274.2
	Colorectal	C18-C21	376	85.1
	Female Breast	C50	226	91.6 <sup>4</sup>
	Pancreas	C25	188	42.5
75-84 years	<b>TOTAL</b>		<b>4,464</b>	<b>1,490.6</b>
	Lung	C33, C34	1,162	388.0
	Colorectal	C18-C21	525	175.3
	Prostate	C61	363	325.1 <sup>5</sup>
	Pancreas	C25	256	85.5
85+ years	<b>TOTAL</b>		<b>2,255</b>	<b>1,871.4</b>
	Colorectal	C18-C21	358	297.1
	Lung	C33, C34	327	271.4
	Prostate	C61	251	798.2 <sup>5</sup>
	Female Breast	C50	192	215.6 <sup>4</sup>

1. Common terms are used to describe causes of cancer death. For detailed terminology, please refer to the ICD-10 codes listed on page 121.  
2. Number of deaths per 100,000 residents in each age group. 3. Calculations based on fewer than five events are excluded. 4. Calculation based on female population in specified age group. 5. Calculation based on male population in specified age group



Table C-9. Leading Causes of Cancer Deaths and Age-Adjusted Rates by Race & Hispanic Ethnicity, Massachusetts: 1999

Cause <sup>2</sup>	<u>White, non-Hispanic</u> <sup>1</sup>		<u>Black, non-Hispanic</u> <sup>1</sup>		<u>Asian/Pacific Islander, non-Hispanic</u> <sup>1</sup>		<u>Hispanic</u>	
	#	Rate <sup>3</sup>	Cause	#	Rate	Cause	#	Rate
Lung	3,399	55.6	Lung	129	73.8	Lung	35	38.5
Colorectal	1,432	22.6	Colorectal	59	35.0	Colorectal	13	14.9
Female Breast	994	28.3	Pancreas	31	16.8	Female Breast	10	16.4
Prostate	753	33.3	Prostate	31	55.6	Stomach	9	8.8
Pancreas	707	11.4	Female Breast	26	23.6	Non-Hodgkin's	9	10.0
<b>Total Cancer</b>	<b>12,995</b>	<b>209.9</b>	<b>Total Cancer</b>	<b>492</b>	<b>280.2</b>	<b>Total Cancer</b>	<b>160</b>	<b>167.5</b>
						<b>Total Cancer</b>	<b>195</b>	<b>113.2</b>

1. Race categories presented in this report differ from previously published data. Race and ethnicity data in this table are presented as mutually exclusive categories; persons of Hispanic ethnicity are not included in a race category. 2. ICD-10 codes used. Please refer to the ICD-10 codes listing on page 121. 3. All rates are age-adjusted by the direct method using the 2000 US standard population. Rates are per 100,000 population. PLEASE NOTE: the age-adjusted cancer mortality rates presented in this report cannot be compared to those published by the Massachusetts Cancer Registry (MCR). Age-adjusted rates published in this report are adjusted to the 2000 US standard population, consistent with the National Center for Health Statistics tabulation procedures. The MCR publishes age-adjusted cancer mortality rates adjusted to the 1970 US standard population for consistency with procedures used by the National Cancer Institute.

**Table C-10. Injury Deaths by Gender, Age, Race and Hispanic Ethnicity:  
Numbers, Age-Adjusted, and Age-Specific Rates, Massachusetts: 1999**

Cause of Death <sup>1</sup>	All Injuries		Motor Vehicle <sup>2</sup>		Suicide		Homicide		Other Injuries <sup>3</sup>	
	# <sup>4</sup>	Rate <sup>5</sup>	#	Rate	#	Rate	#	Rate	#	Rate
<b>All Persons</b>	<b>2,323</b>	<b>35.2</b>	<b>433</b>	<b>6.7</b>	<b>430</b>	<b>6.7</b>	<b>128</b>	<b>2.0</b>	<b>1,332</b>	<b>19.9</b>
<1 <sup>6</sup>	12	14.8	1	-- <sup>7</sup>	0	0.0	4	-- <sup>7</sup>	7	8.7
1-14	51	4.5	14	1.2	10	0.9	5	0.4	22	2.0
15-24	267	30.2	107	12.1	45	5.1	40	4.5	75	8.5
25-44	814	40.2	148	7.3	189	9.3	58	2.9	419	20.7
45-64	438	33.3	70	5.3	129	9.8	18	1.4	221	16.8
65+	741	86.0	93	10.8	57	6.6	3	-- <sup>7</sup>	588	68.2
65-74	161	36.4	32	7.2	20	4.5	1	-- <sup>7</sup>	108	24.4
75-84	269	89.8	47	15.7	24	8.0	2	-- <sup>7</sup>	196	65.4
85+	311	258.1	14	11.6	13	10.8	0	0.0	284	235.7
<b>All Females</b>	<b>796</b>	<b>20.8</b>	<b>124</b>	<b>3.6</b>	<b>101</b>	<b>3.1</b>	<b>37</b>	<b>1.2</b>	<b>534</b>	<b>13.0</b>
<1	6	15.2	1	-- <sup>7</sup>	0	0.0	2	-- <sup>7</sup>	3	-- <sup>7</sup>
1-14	19	3.5	5	0.9	0	0.0	4	-- <sup>7</sup>	10	1.8
15-24	65	14.7	30	6.8	12	2.7	7	1.6	16	3.6
25-44	206	20.2	37	3.6	44	4.3	16	1.6	109	10.7
45-64	111	16.4	17	2.5	32	4.7	8	1.2	54	8.0
65+	389	74.3	34	6.5	13	2.5	0	0.0	342	65.3
65-74	64	25.9	11	4.5	6	2.4	0	0.0	47	19.1
75-84	119	63.4	17	9.1	5	2.7	0	0.0	97	51.6
85+	206	231.3	6	6.7	2	-- <sup>7</sup>	0	0.0	198	222.3
<b>All Males</b>	<b>1,527</b>	<b>51.7</b>	<b>309</b>	<b>10.2</b>	<b>329</b>	<b>10.9</b>	<b>91</b>	<b>2.8</b>	<b>798</b>	<b>27.9</b>
<1	6	14.5	0	0.0	0	0.0	2	-- <sup>7</sup>	4	-- <sup>7</sup>
1-14	32	5.5	9	1.6	10	1.7	1	-- <sup>7</sup>	12	2.1
15-24	202	45.7	77	17.4	33	7.5	33	7.5	59	13.4
25-44	608	60.4	111	11.0	145	14.4	42	4.2	310	30.8
45-64	327	51.5	53	8.3	97	15.3	10	1.6	167	26.3
65+	352	104.0	59	17.4	44	13.0	3	-- <sup>7</sup>	246	72.7
65-74	97	49.6	21	10.7	14	7.2	1	-- <sup>7</sup>	61	31.2
75-84	150	134.3	30	26.9	19	17.0	2	-- <sup>7</sup>	99	88.7
85+	105	333.9	8	25.4	11	35.0	0	0.0	86	273.5

1. Data presented in this table are classified according to ICD-10. Please refer to page 121 for list of ICD-10 codes used in this table. 2. Motor vehicle deaths to occupants, pedestrians, motorcyclists and bicyclists. 3. Other Injuries include deaths such as drownings, fires, falls and drug overdoses. This category includes deaths from unintentional injuries and injuries of undetermined intent (deaths where investigation has not determined whether the injuries were accidental or purposely inflicted). 4. Column sum may not equal total because age or race of some decedents was not known. 5. Number of deaths per 100,000 persons in each age group; rates for all rows except the age group rows are age-adjusted to the 2000 US standard population. 6. The denominator used in this age group is the number of 1999 resident births. 7. Calculations based on fewer than five events are excluded. 8. Race categories presented in this report differ from previously published data. Race and ethnicity data in this table are presented as mutually exclusive categories; persons of Hispanic ethnicity are not included in a race category. Please refer to the Section Definitions for a more detailed explanation.

**Table C-10. (continued) Injury Deaths by Gender, Age, Race and Hispanic Ethnicity:  
Numbers, Age-Adjusted, and Age-Specific Rates, Massachusetts: 1999**

Cause of Death <sup>1</sup>	All Injuries		Motor Vehicle <sup>2</sup>		Suicide		Homicide		Other Injuries <sup>3</sup>	
	# <sup>4</sup>	Rate <sup>5</sup>	#	Rate	#	Rate	#	Rate	#	Rate
<b>Race/Gender<sup>8</sup></b>										
<b>White, non-Hispanic</b>	2,023	34.2	371	6.5	388	6.9	54	1.0	1,210	19.9
Females	735	21.1	113	3.7	91	3.1	24	0.9	507	13.4
Males	1,288	49.4	258	9.7	297	11.1	30	1.1	703	27.5
<b>Black, non-Hispanic</b>	133	48.8	25	9.2	12	3.9	41	12.6	55	23.0
Females	23	17.1	3	-- <sup>7</sup>	1	-- <sup>7</sup>	6	3.6	13	10.7
Males	110	84.1	22	18.1	11	7.3	35	21.9	42	36.9
<b>Asian, non-Hispanic</b>	28	18.5	8	5.4	9	4.5	2	-- <sup>7</sup>	9	7.8
Females	9	10.7	3	-- <sup>7</sup>	4	-- <sup>7</sup>	0	0.0	2	-- <sup>7</sup>
Males	19	28.2	5	9.7	5	4.4	2	-- <sup>7</sup>	7	12.5
<b>Hispanics</b>	136	39.8	29	8.3	20	5.9	31	7.4	56	18.2
Females	28	16.8	5	2.3	5	3.2	7	3.6	11	7.7
Males	108	63.8	24	14.8	15	9.0	24	11.3	45	28.7

1. Data presented in this table are classified according to ICD-10. Please refer to page 121 for list of ICD-10 codes used in this table. 2. Motor vehicle deaths to occupants, pedestrians, motorcyclists and bicyclists. 3. Other Injuries include deaths such as drownings, fires, falls and drug overdoses. This category includes deaths from unintentional injuries and injuries of undetermined intent (deaths where investigation has not determined whether the injuries were accidental or purposely inflicted). 4. Column sum may not equal total because age or race of some decedents was not known. 5. Number of deaths per 100,000 persons in each age group; rates for all rows except the age group rows are age-adjusted to the 2000 US standard population. 6. The denominator used in this age group is the number of 1999 resident births. 7. Calculations based on fewer than five events are excluded. 8. Race categories presented in this report differ from previously published data. Race and ethnicity data in this table are presented as mutually exclusive categories; persons of Hispanic ethnicity are not included in a race category. Please refer to the Section Definitions for a more detailed explanation.

Table C-11a. HIV Disease Deaths (AIDS)<sup>1</sup> by Place of Occurrence, Massachusetts: 1987-1999

Year	Total		Place of Occurrence									
			At Home		Hospital		Out of State		Hospice/Nursing Home/Other			
	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>
1987	# 241	NA <sup>3</sup>	26	NA	207	NA	5	NA	3	NA		
	% 100.0		10.8		85.9		2.1		-			
1988	# 315	NA	67	NA	234	NA	7	NA	7	NA		
	% 100.0		21.3		74.3		2.2		2.2			
1989	# 404	NA	79	NA	313	NA	7	NA	5	NA		
	% 100.0		19.6		77.5		1.7		1.2			
1990	# 447	NA	90	NA	284	NA	9	NA	64	NA		
	% 100.0		20.1		63.5		2.1		14.3			
1991	# 632	NA	159	NA	338	NA	4	NA	131	NA		
	% 100.0		25.2		53.5		-		20.7			
1992	# 701	NA	171	NA	394	NA	14	NA	122	NA		
	% 100.0		24.4		56.2		2.0		17.4			
1993	# 777	NA	218	NA	413	NA	14	NA	127	NA		
	% 100.0		28.1		53.2		1.8		16.3			
1994	# 938	998	265	282	514	547	13	14	142	151		
	% 100.0		28.3		54.8		1.4		15.1			
1995	# 937	997	303	322	500	532	7	7	127	135		
	% 100.0		32.3		53.4		0.7		13.6			
1996	# 609	648	154	164	336	357	9	10	110	117		
	% 100.0		25.3		55.2		1.5		18.1			
1997	# 242	277	59	68	158	181	4	5	21	24		
	% 100.0		24.4		65.3		-		8.6			
1998	# 213	244	46	53	130	149	2	2	35	40		
	% 100.0		21.6		61.0		-		16.4			
1999	# 242 <sup>4</sup>		55 <sup>4</sup>		142 <sup>4</sup>		2 <sup>4</sup>		43 <sup>4</sup>			
	% 100.0		22.7		58.7		-		17.8			

\*\*PLEASE NOTE: this table has been updated June 2001 to reflect the revised comparability ratio of HIV Disease Deaths, issued by the National Center for Health Statistics. 1. AIDS: Acquired Immune Deficiency Syndrome, HIV: Human Immunodeficiency Virus. The deaths reported are cases for which AIDS or HIV-related disease was the underlying cause of death. Deaths for 1987-1998 were coded according to the ICD-9 classification schedule, which began with 1987 death data (codes 042-044). Deaths for 1999 were coded according to the ICD-10 (codes B20-B24). 2. Comparability Modified (CM): this number has been adjusted using the preliminary comparability ratio (CR) from NCHS (revised June 2001). CM data for 1994-1996 use 1996 based CR; CM data for 1997-1998 use revised 1998 based CR. 3. NA: Comparability ratio is not applicable for years prior to 1994. 4. When comparing data over time between 1994 through 1999, please use the comparability modified number for years 1994-1998.

Table C-11b. HIV Disease Deaths (AIDS)<sup>1</sup> by Age, Massachusetts: 1987-1999

Year	Age (in years)									
	<15		15-24		25-34		35-44		45+	
	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>
1987	# 5	NA <sup>3</sup>	8	NA	105	NA	78	NA	45	NA
	% 2.1		3.3		43.6		32.3		18.7	
1988	# 5	NA	12	NA	111	NA	127	NA	60	NA
	% 1.6		3.8		35.2		40.3		19.1	
1989	# 3	NA	16	NA	146	NA	167	NA	72	NA
	% -		4.0		36.1		41.3		17.8	
1990	# 3	NA	4	NA	147	NA	197	NA	96	NA
	% -		-		32.8		44.1		21.5	
1991	# 9	NA	19	NA	214	NA	298	NA	92	NA
	% 1.4		3.0		33.8		47.2		14.6	
1992	# 6	NA	5	NA	243	NA	304	NA	143	NA
	% 0.8		0.7		34.7		43.4		20.4	
1993	# 10	NA	5	NA	234	NA	359	NA	169	NA
	% 1.3		0.6		30.1		46.2		21.8	
1994	# 7	7	8	9	272	289	464	494	187	199
	% 0.7		0.9		29.0		49.5		19.9	
1995	# 11	12	5	5	272	289	443	471	206	219
	% 1.2		0.5		29.0		47.3		22.0	
1996	# 4	4	8	9	154	164	300	319	143	152
	% 0.7		1.3		25.3		49.3		23.5	
1997	# 5	6	1	1	35	40	135	155	66	76
	% 2.1		-		14.5		55.8		27.3	
1998	# 0	0	0	0	47	54	106	121	60	69
	% 0.0		0.0		22.1		49.8		28.2	
1999	# 2 <sup>4</sup>	9 <sup>4</sup>	34 <sup>4</sup>	112 <sup>4</sup>	85 <sup>4</sup>	35.1				
	% -		3.7	14.0	46.3					

\*\*PLEASE NOTE: this table has been updated June 2001 to reflect the revised comparability ratio of HIV Disease Deaths, issued by the National Center for Health Statistics. 1. AIDS: Acquired Immune Deficiency Syndrome. HIV: Human Immunodeficiency Virus. The deaths reported are cases for which AIDS or HIV-related disease was the underlying cause of death. Deaths for 1987-1998 were coded according to the ICD-9 classification schedule, which began with 1987 death data (codes 042-044). Deaths for 1999 were coded according to the ICD-10 (codes B20-B24). 2. Comparability Modified (CM): this number has been adjusted using the preliminary comparability ratio (CR) from NCHS (revised June 2001). CM data for 1994-1996 use 1996 based CR; CM data for 1997-1998 use revised 1998 based CR. 3. NA: Comparability ratio is not applicable for years prior to 1994. 4. When comparing data over time between 1994 through 1999, please use the comparability modified number for years 1994-1999.

Table C11c. HIV Disease Deaths (AIDS)<sup>1</sup> by Gender and Race/Ethnicity, Massachusetts: 1987-1999

Year	Gender			Race and Ethnicity											
	Male		Female	White, non-Hispanic <sup>2</sup>				Black, non-Hispanic <sup>2</sup>				Other <sup>3</sup>			
				Comparability Modified <sup>4</sup>		Comparability Unmodified	Comparability Modified <sup>4</sup>	Comparability Modified <sup>4</sup>		Comparability Unmodified	Comparability Modified <sup>4</sup>	Comparability Modified <sup>4</sup>		Comparability Unmodified	Comparability Modified <sup>4</sup>
	#	%	#	Unmodified	Modified <sup>4</sup>		Unmodified	Unmodified	Modified <sup>4</sup>		Unmodified	Unmodified	Modified <sup>4</sup>	Unmodified	Modified <sup>4</sup>
1987	209		32	NA	NA <sup>5</sup>		NA	NA	NA	NA	NA	NA	NA	NA	NA
	86.7		13.3												
1988	281		34	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA
	89.2		10.8												
1989	359		45	NA	NA		290	76	NA	18.8	1	NA	37	NA	NA
	88.9		11.1				71.8				-		9.2		
1990	390		57	NA	NA		301	94	NA	21.1	0	NA	50	NA	NA
	87.2		12.8				67.5				0.0		11.2		
1991	535		97	NA	NA		439	118	NA	18.7	1	NA	74	NA	NA
	84.6		15.4				69.5				-		11.7		
1992	605		96	NA	NA		463	141	NA	20.1	2	NA	95	NA	NA
	86.3		13.7				66.0				-		13.6		
1993	663		114	NA	NA		518	160	NA	20.6	5	NA	94	NA	NA
	85.3		14.7				66.7				0.6		12.1		
1994	763		175	812	186		581	193	618	205	7	7	157	167	
	81.3		18.7				61.9				0.7		16.7		
1995	753		184	801	196		554	223	589	237	5	5	155	165	
	80.4		19.6				59.1				0.5		16.5		
1996	494		115	525	122		341	161	363	171	5	5	101	107	
	81.1		18.9				56.0				0.8		16.6		
1997	190		52	218	60		121	74	139	85	0	0	47	54	
	78.5		21.5				50.0				0.0		19.4		
1998	169		44	193	50		104	51	119	58	0	0	58	66	
	79.3		20.7				48.8				0.0		27.2		
1999	177 <sup>6</sup>		65 <sup>6</sup>				126 <sup>6</sup>	51 <sup>6</sup>			2 <sup>6</sup>		63 <sup>6</sup>		
	73.1		26.9				52.1				-		26.0		

PLEASE NOTE: this table has been updated June 2001 to reflect the revised comparability ratio of HIV Disease Deaths, issued by the National Center for Health Statistics. 1. AIDS: Acquired Immune Deficiency Syndrome, HIV: Human Immunodeficiency Virus. The deaths reported are cases for which AIDS or HIV-related disease was the underlying cause of death. Deaths for 1987-1998 were coded according to the ICD-9 classification schedule, which began with 1987 death data (codes 042-044). Deaths for 1999 were coded according to the ICD-10 (codes B20-B24). 2. Race categories presented in this report differ from previously published data. Race and ethnicity data in this table are presented as mutually exclusive categories; persons of Hispanic ethnicity are not included in a race category. 3. The "Other" category represents Asian/Pacific Islander, non-Hispanics and American Indian, non-Hispanics. 4. Comparability Modified: this number has been adjusted using the preliminary comparability ratio (CR) from NCHS (June 2001). CM data for 1994-1996 use 1996 based CR; CM data for 1997-1998 use revised 1998 based CR. 5. NA=not available. 6. When comparing data over time between 1994 through 1999, please use the comparability modified number for years 1994-1998.

**Table C-12. HIV Disease Deaths (AIDS)<sup>1</sup> by Race, Hispanic Ethnicity, and Gender  
Persons Ages 25-44, Massachusetts: 1989 – 1999**

White, non-Hispanic <sup>2</sup>												Black, non-Hispanic <sup>2</sup>				Hispanic			
TOTAL																			
Year	#	Rate <sup>3</sup>	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate					
	Comparability Unmodified		Comparability Modified <sup>4</sup>		Comparability Unmodified		Comparability Modified <sup>4</sup>		Comparability Unmodified		Comparability Modified <sup>4</sup>		Comparability Unmodified						
1989	221	12.8	NA <sup>5</sup>	NA	60	65.1	NA	NA	32	36.0	NA	NA							
1990	230	13.0	NA	NA	73	76.5	NA	NA	40	42.4	NA	NA							
1991	357	20.1	NA	NA	99	102.9	NA	NA	55	55.6	NA	NA							
1992	362	20.5	NA	NA	105	111.0	NA	NA	79	78.3	NA	NA							
1993	391	22.3	NA	NA	122	130.4	NA	NA	76	73.0	NA	NA							
1994	451	25.6	480	27.2	152	162.0	162	172.3	127	118.3	135	125.8							
1995	428	24.3	455	25.8	159	169.7	169	180.5	124	113.0	132	120.2							
1996	251	14.2	267	15.1	113	121.1	120	128.8	85	75.4	90	80.2							
1997	86	4.9	98	5.6	48	51.3	55	58.7	36	31.1	41	35.6							
1998	68	3.9	78	4.5	38	40.7	44	46.6	47	39.8	54	45.6							
1999	74 <sup>6</sup>		4.2		32 <sup>6</sup>		34.3		40 <sup>6</sup>		33.9								
MALE																			
1989	206	24.1	NA	NA	43	95.8	NA	NA	26	59.4	NA	NA							
1990	212	24.3	NA	NA	50	107.2	NA	NA	36	77.2	NA	NA							
1991	322	36.7	NA	NA	71	150.7	NA	NA	39	79.5	NA	NA							
1992	328	37.6	NA	NA	79	170.0	NA	NA	64	127.7	NA	NA							
1993	350	40.3	NA	NA	91	197.6	NA	NA	57	110.3	NA	NA							
1994	388	44.5	413	47.3	113	244.3	120	259.9	93	174.2	99	185.3							
1995	367	42.1	390	44.8	112	242.2	119	257.6	90	164.5	96	175.0							
1996	221	25.3	235	26.9	73	158.1	78	168.2	61	108.5	65	115.4							
1997	71	8.1	81	9.3	30	64.6	34	74.0	28	48.5	32	55.5							
1998	57	6.6	65	7.6	27	58.2	31	66.6	34	57.7	39	66.1							
1999	54 <sup>6</sup>		6.2		20 <sup>6</sup>		43.1		30 <sup>6</sup>		50.9								
FEMALE																			
1989	15	1.7	NA	NA	17	36.0	NA	NA	6	13.3	NA	NA							
1990	18	2.0	NA	NA	23	47.1	NA	NA	4	— <sup>5</sup>	NA	NA							
1991	35	3.9	NA	NA	28	57.1	NA	NA	16	32.0	NA	NA							
1992	34	3.8	NA	NA	26	54.0	NA	NA	15	29.5	NA	NA							
1993	41	4.6	NA	NA	31	65.2	NA	NA	19	36.3	NA	NA							
1994	63	7.1	67	7.6	39	82.0	41	87.2	34	63.0	36	67.0							
1995	61	6.9	65	7.3	47	99.0	50	105.3	34	61.8	36	65.7							
1996	30	3.4	32	3.6	40	84.9	43	90.3	24	42.4	26	45.1							
1997	15	1.7	17	1.9	18	38.2	21	43.7	8	13.8	9	15.8							
1998	11	1.3	13	1.5	11	23.4	13	26.8	13	22.0	15	25.2							
1999	20 <sup>6</sup>		2.3		12 <sup>6</sup>		25.5		10 <sup>6</sup>		16.9								

**\*\*Please Note:** This table has been updated June 2001 to reflect the revised comparability ratio of HIV Disease Deaths, issued by NCHS. 1. AIDS and HIV disease deaths for years 1989-1998 coded using ICD-9: 042-044, 1999 deaths coded using ICD-10: B20-B24. 2. Race categories presented in this report differ from previously published data. Race and ethnicity data in this table are presented as mutually exclusive categories; persons of Hispanic ethnicity are not included in a race category. 3. Number of deaths per 100,000 residents in the specified population group. 1998 rates have been recalculated using 1998 MISER population estimates (released September 2000). 4. Comparability Modified (CM) number and rate based on preliminary comparability ratios (CR) from NCHS (June 2001). CM data for 1994-1996 use 1996 based CR; CM data for 1997-1998 use revised 1998 based CR. 5. NA= not applicable. 6. When comparing data over time between 1994 through 1999, please use comparability modified data for years 1994-1998.

Table C-13A. Medical Examiner Certified Deaths by Cause, Race, Sex, and Age, Massachusetts Occurrence:1999

Table C-13A. Medical Examiner Certified Deaths by Cause, Race, Sex, and Age, Massachusetts Occurrence:1999													
Age	Race/Sex	Total Deaths Certified by		Motor Vehicle Injuries (V01-V99)	Suicide (X60-X84)	Homicide (X85-X99, Y00-Y09)	Legal Intervention/Undeter. Injury (Y10-Y36)	All Other Injuries (X00-X59)	Non-violent Causes (A-Q, R00-R94)	Ill Defined & Unknown Causes (R95-R99)			
		Medical Examiner											
Total	White M	2259	297	292	39	274	246	1061	50				
	F	1050	123	97	25	116	120	547	22				
	Black M	205	23	10	35	19	13	99	6				
	F	67	3	1	6	3	3	46	5				
1-14	Other M	144	22	21	19	17	11	45	9				
	F	42	7	7	2	3	4	18	1				
	White M	31	0	0	1	1	2	12	15				
	F	20	1	0	2	1	1	6	9				
15-19	Black M	6	0	0	1	0	1	2	2				
	F	7	0	0	0	0	1	4	2				
	Other M	1	0	0	0	0	0	0	1				
	F	2	0	0	0	0	0	0	1				
20-29	White M	37	8	10	1	0	7	9	2				
	F	24	4	0	3	1	8	6	2				
	Black M	4	1	0	0	0	2	1	0				
	F	4	0	0	1	0	0	2	1				
30-34	Other M	5	1	0	0	0	2	2	0				
	F	3	1	0	0	0	1	1	0				
	White M	67	37	8	4	4	7	7	0				
	F	34	20	5	0	2	1	3	3				
35-39	Black M	15	5	2	6	0	0	2	0				
	F	0	0	0	0	0	0	0	0				
	Other M	10	3	2	3	0	1	1	0				
	F	5	2	1	0	0	0	2	0				
40-44	White M	205	50	37	11	59	20	24	4				
	F	77	20	13	4	22	4	12	2				
	Black M	32	6	6	14	1	0	3	2				
	F	7	2	0	2	0	0	2	1				
45-49	Other M	46	11	10	13	4	1	5	2				
	F	6	3	2	1	0	0	0	0				
	White M	31	0	0	1	1	2	12	15				
	F	20	1	0	2	1	1	6	9				
50-54	Black M	6	0	0	1	0	1	2	2				
	F	7	0	0	0	0	1	4	2				
	Other M	1	0	0	0	0	0	0	1				
	F	2	0	0	0	0	0	0	1				
55-59	White M	37	8	10	1	0	7	9	2				
	F	24	4	0	3	1	8	6	2				
	Black M	4	1	0	0	0	2	1	0				
	F	4	0	0	1	0	0	2	1				
60-64	Other M	5	1	0	0	0	2	2	0				
	F	3	1	0	0	0	1	1	0				
	White M	67	37	8	4	4	7	7	0				
	F	34	20	5	0	2	1	3	3				
65-69	Black M	15	5	2	6	0	0	2	0				
	F	0	0	0	0	0	0	0	0				
	Other M	10	3	2	3	0	1	1	0				
	F	5	2	1	0	0	0	2	0				
70-74	White M	205	50	37	11	59	20	24	4				
	F	77	20	13	4	22	4	12	2				
	Black M	32	6	6	14	1	0	3	2				
	F	7	2	0	2	0	0	2	1				
75-79	Other M	46	11	10	13	4	1	5	2				
	F	6	3	2	1	0	0	0	0				
	White M	31	0	0	1	1	2	12	15				
	F	20	1	0	2	1	1	6	9				
80-84	Black M	6	0	0	1	0	1	2	2				
	F	7	0	0	0	0	1	4	2				
	Other M	1	0	0	0	0	0	0	1				
	F	2	0	0	0	0	0	0	1				
85-89	White M	37	8	10	1	0	7	9	2				
	F	24	4	0	3	1	8	6	2				
	Black M	4	1	0	0	0	2	1	0				
	F	4	0	0	1	0	0	2	1				
90-94	Other M	5	1	0	0	0	2	2	0				
	F	3	1	0	0	0	1	1	0				
	White M	67	37	8	4	4	7	7	0				
	F	34	20	5	0	2	1	3	3				
95-99	Black M	15	5	2	6	0	0	2	0				
	F	0	0	0	0	0	0	0	0				
	Other M	10	3	2	3	0	1	1	0				
	F	5	2	1	0	0	0	2	0				



Table C-13A (Continued). Medical Examiner Certified Deaths by Cause, Race, Sex, and Age, Massachusetts Occurrence:1999

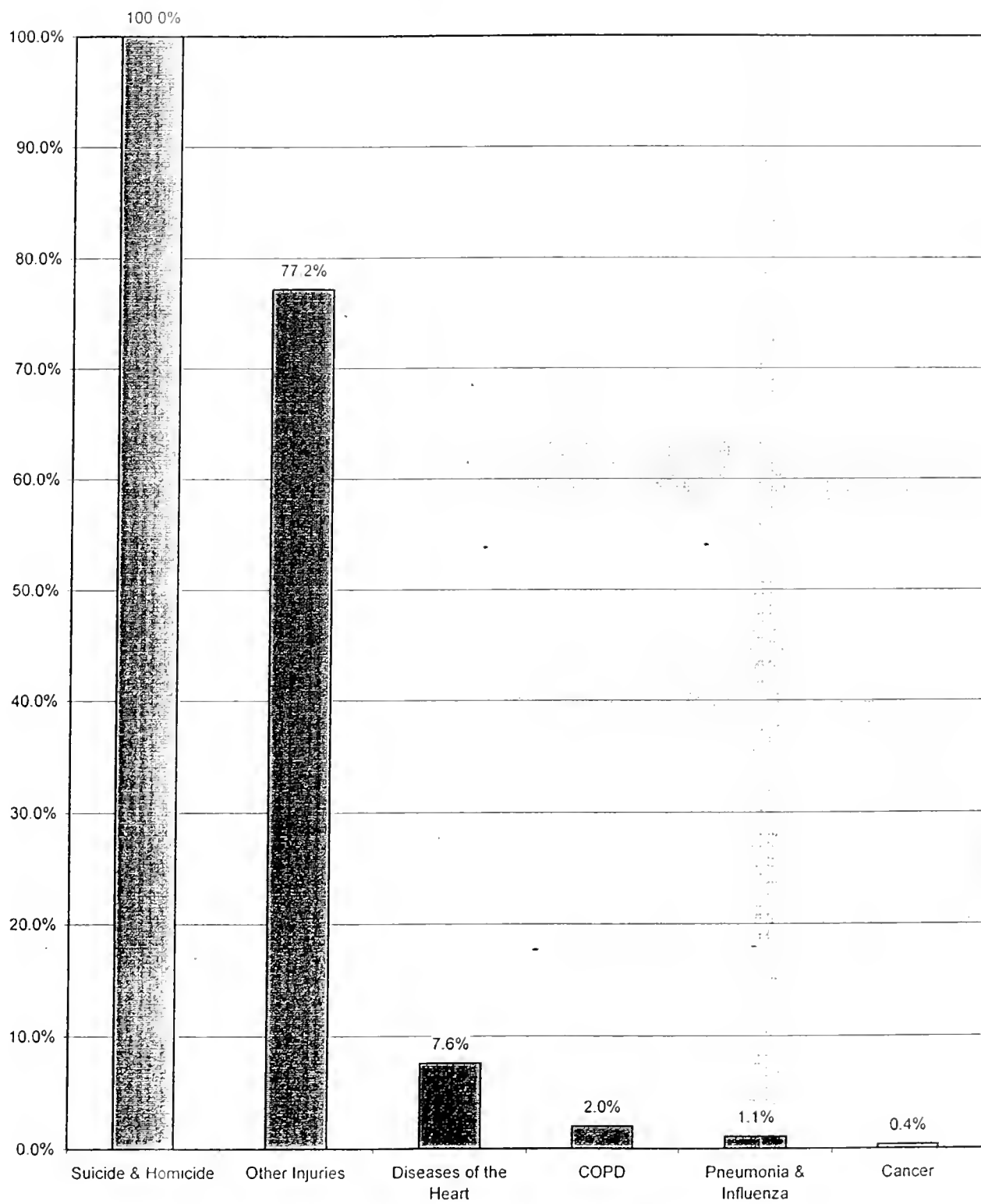
Cause of Death Statistics by Age, Race, and Sex (2010-2019)												
Age	Race/Sex	Total Deaths		Motor Vehicle Injuries (V01-V99)	Suicide (X60-X84)	Homicide (X85-X99, Y00-Y09)	Legal Intervention/Undeter. Injury (Y10-Y36)	All Other Injuries (STW:00-99, X00-X59)	Non-violent Causes (A-Q, R00-R94)	Ill Defined & Unknown Causes (R95-R99)		
		Certified by Medical Examiner	Injuries									
30-39	White M	393	55	72	4	101	42	106	13			
	F	132	13	18	7	39	7	48	0			
	Black M	38	6	0	10	6	3	13	0			
	F	15	0	0	3	0	1	11	0			
	Other M	33	3	5	2	8	3	9	3			
40-49	F	8	0	1	1	1	1	4	0			
	White M	495	42	56	10	77	44	256	10			
	F	177	17	23	5	42	8	80	2			
	Black M	43	1	1	3	8	2	27	1			
	F	16	0	1	0	3	0	12	0			
50-59	Other M	22	1	2	1	2	1	12	3			
	F	7	0	1	0	2	0	4	0			
	White M	345	31	49	4	24	26	206	5			
	F	117	12	19	3	7	4	72	0			
	Black M	35	1	1	0	3	2	28	0			
60-69	F	6	1	0	0	0	0	5	0			
	Other M	13	1	1	0	3	2	6	0			
	F	4	0	2	0	0	0	2	0			
	White M	247	24	26	2	6	26	163	0			
	F	82	8	8	1	2	8	53	2			
70-79	Black M	17	2	0	1	1	2	10	1			
	F	3	0	0	0	0	0	3	0			
	Other M	8	1	0	0	0	1	6	0			
	F	1	0	0	0	0	0	1	0			
	White M	235	29	15	0	0	34	156	1			
	F	166	13	7	0	0	31	114	1			
	Black M	8	0	0	0	0	0	8	0			
	F	3	0	0	0	0	0	3	0			
	Other M	3	0	0	0	0	0	3	0			
	F	3	0	0	0	0	1	2	0			

**Table C-13A (Continued). Medical Examiner Certified Deaths by Cause, Race, Sex, and Age, Massachusetts Occurrence:1999**

Age	Race/Sex	Total Deaths Certified by Medical Examiner		Motor Vehicle Injuries (V01-V99)		Suicide (X60-X84)	Homicide (X85-X99, Y00-Y09)	Legal Intervention/Undeter. Injury (Y10-Y36)		All Other Injuries (STW:00-99, X00-X59)	Non-violent Causes (A-Q, R00-R94)	Ill Defined & Unknown Causes (R95-R99)
		204	221	21	15	19	2	2	0	2	38	122
80+	White M	204	221	21	15	19	2	2	0	38	122	0
	F					4	0	0	0	48	153	1
	Black M	7		1		0	0	0	0	1	5	0
	F	6		0		0	0	0	0	1	4	1
	Other M	3		1		1	0	0	0	0	1	0
	F	3		1		0	0	0	0	1	1	0

\* Does not include 16 deaths with unknown status.

Figure C-5. Proportion of Deaths Certified by Medical Examiner for Selected Causes of Death,  
Massachusetts Occurrence Deaths: 1999



**Table C-13B. Medical Examiner Certified Deaths by County,  
Massachusetts Occurrence: 1999**

County		Population	Occurrence Deaths	M.E. Certified	Referred-Not Certified by M.E.	Natural Cause Deaths certified By M.E.
Total	#	6,332,530	56,596	3,783	9,259	1,798
	%	100.00%	100.00%	6.68%	16.36%	47.53%
	Rank	-	-	-	-	-
Barnstable	#	214,663	2,579	172	332	95
	%	3.39%	4.46%	6.67%	12.87%	55.23%
	Rank	9	9	10	11	2
Berkshire	#	137,750	1,692	103	264	42
	%	2.18%	2.93%	6.09%	15.60%	40.78%
	Rank	11	10	11	8	13
Bristol	#	532,609	4,661	326	691	147
	%	8.41%	8.06%	6.99%	14.83%	45.09%
	Rank	6	7	8	9	8
Dukes	#	14,829	105	15	9	11
	%	0.23%	0.18%	14.29%	8.57%	73.33%
	Rank	13	13	1	13	1
Essex	#	720,793	6,121	363	760	187
	%	11.38%	10.59%	5.93%	12.42%	51.52%
	Rank	3	4	12	12	6
Franklin	#	72,215	572	48	75	25
	%	1.14%	0.99%	8.39%	13.11%	52.08%
	Rank	12	12	2	10	5
Hampden	#	456,191	5,020	341	903	139
	%	7.20%	8.69%	6.79%	17.99%	40.76%
	Rank	8	6	9	3	11
Hampshire	#	156,100	987	76	185	31
	%	2.47%	1.71%	7.70%	18.74%	40.79%
	Rank	10	11	5	2	12
Middlesex	#	1,467,200	10,869	619	1,843	337
	%	23.17%	18.80%	5.70%	16.96%	54.44%
	Rank	1	1	13	5	3
Nantucket	#	8,651	60	5	1	2
	%	0.14%	0.10%	8.33%	1.67%	40.00%
	Rank	14	14	3	14	14
Norfolk	#	655,147	5,024	252	791	131
	%	10.35%	8.69%	5.02%	15.74%	51.98%
	Rank	5	5	14	7	4
Plymouth	#	472,574	3,331	246	548	118
	%	7.46%	5.76%	7.39%	16.45%	47.97%
	Rank	7	8	6	6	7
Suffolk	#	669,941	8,656	719	1,556	311
	%	10.58%	14.97%	8.31%	17.98%	43.25%
	Rank	4	2	4	4	10
Worcester	#	753,867	6,919	498	1,301	222
	%	11.90%	11.97%	7.20%	18.80%	44.58%
	Rank	2	3	7	1	9

The percentages and ranks in the Medical Examiner Certified Deaths column and the Referred column are based on totals in the Occurrences Deaths column. The percentages and ranks of natural cause of death are based on total number of medical examiner certified deaths for each county. Total population based on sum of county estimates.

Table C-14A. Selected Causes of Death by Community, 1999

COMMUNITY	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
<b>Massachusetts</b>	<b>55,763</b>	<b>815.9</b>	<b>15,539</b>	<b>13,852</b>	<b>3,592</b>	<b>1,048</b>	<b>3,573</b>	<b>2,857</b>	<b>1,327</b>	<b>2,176</b>	<b>433</b>	<b>128</b>	<b>430</b>
Abington	104	693.2	26	31	10	1	4	12	3	3	0	0	2
Acton	88	714.4	19	31	7	3	3	4	3	5	1	0	1
Acushnet	69	581.5	22	14	3	1	6	4	1	1	1	0	1
Adams	145	1,057.2	56	33	6	1	11	4	2	7	2	0	1
Agawam	350	966.9	101	82	28	6	22	22	7	18	2	0	5
Alford	1	--	0	1	0	0	0	0	0	0	0	0	0
Amesbury	164	1,137.5	42	37	9	0	4	16	8	1	2	0	4
Amherst	126	742.6	35	26	7	1	6	9	5	6	1	0	0
Andover	234	991.3	67	63	17	6	19	16	5	8	3	0	2
Arlington	467	724.9	143	113	31	10	30	17	8	24	1	0	0
Ashburnham	38	880.9	7	11	1	1	4	3	1	0	0	0	1
Ashby	23	1,019.2	4	6	2	0	0	0	0	1	2	0	0
Ashfield	11	615.4	2	6	3	0	0	0	0	1	1	0	0
Ashland	73	665.9	17	21	7	0	2	3	1	3	1	0	0
Athol	125	813.6	32	25	2	1	9	11	5	3	0	0	2
Attleboro	346	918.0	107	79	19	5	23	15	11	11	7	0	1
Auburn	168	843.0	51	40	7	2	7	9	4	10	0	0	1
Avon	36	737.2	12	4	1	0	5	3	2	2	1	0	0
Ayer	82	1,866.2	20	21	4	2	6	6	0	1	0	0	0
Barnstable	525	690.1	134	150	36	12	33	32	10	6	7	0	4
Barre	30	549.0	10	10	3	0	0	2	0	1	0	0	0
Becket	10	665.8	5	0	0	0	0	1	0	0	0	0	0
Bedford	139	987.7	23	38	12	4	7	6	3	7	1	0	0
Belchertown	78	799.5	23	17	3	0	1	5	5	2	0	0	0
Bellingham	87	771.8	29	23	7	5	1	2	1	1	3	0	2
Belmont	213	537.7	51	63	10	4	15	4	4	11	0	0	1
Berkley	17	725.3	2	4	0	1	1	1	0	2	0	0	0
Berlin	12	509.6	7	4	3	0	0	0	0	0	0	0	0
Bernardston	14	515.8	5	3	1	0	1	1	0	1	0	0	0
Beverly	420	925.5	120	93	24	5	31	23	11	19	1	0	0
Billerica	255	1,102.2	66	67	14	7	13	15	8	5	5	0	2
Blackstone	64	840.4	17	13	2	2	5	3	0	5	0	0	3
Blandford	8	1,632.4	1	3	0	1	2	0	0	0	0	0	1
Bolton	18	868.6	3	7	3	0	1	1	1	1	0	0	1
Boston	4,491	914.1	1,166	1,057	292	68	239	212	108	173	21	31	31

Table C-14A. Selected Causes of Death by Community, 1999 (continued)

COMMUNITY	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
Bourne	199	956.7	62	53	17	6	10	8	3	4	2	0	1
Boxborough	9	783.8	2	4	0	0	0	0	0	0	0	0	0
Boxford	29	539.8	6	8	3	0	3	1	1	1	0	0	2
Boylston	23	774.5	10	2	0	0	2	3	0	1	0	0	0
Braintree	423	941.2	112	117	33	7	24	23	6	21	3	0	4
Brewster	123	743.6	29	33	8	2	8	7	4	7	0	0	0
Bridgewater	132	806.6	31	37	7	4	10	8	3	5	7	1	1
Brimfield	29	809.8	6	5	0	1	4	2	2	1	1	0	0
Brockton	840	863.2	253	185	47	11	48	41	22	28	7	8	6
Brookfield	40	1,096.7	11	9	2	0	4	0	1	3	3	0	1
Brookline	405	490.7	111	94	17	16	26	19	7	23	2	0	4
Buckland	21	1,052.0	5	11	1	3	1	0	0	1	0	0	0
Burlington	149	872.1	43	41	6	4	12	4	1	5	0	0	3
Cambridge	648	747.5	173	158	32	14	36	26	19	25	3	1	8
Canton	238	1,793.4	62	52	12	4	16	8	4	17	2	0	1
Carlisle	13	522.6	3	6	0	0	0	0	0	2	0	0	0
Carver	110	905.6	29	46	14	2	7	7	1	2	1	0	1
Charlemont	10	777.1	2	3	0	0	1	0	0	0	0	0	0
Charlton	72	1,250.9	18	13	2	2	4	9	3	3	0	0	1
Chatham	133	680.0	33	36	4	2	8	6	3	6	1	0	2
Chelmsford	259	940.3	72	63	19	9	18	13	5	7	2	0	3
Chelsea	307	1,086.7	82	67	14	5	20	11	7	12	1	2	0
Cheshire	31	808.2	13	7	5	0	0	3	0	2	0	0	0
Chester	9	1,901.0	5	2	0	0	0	0	0	0	0	0	0
Chesterfield	3	-- <sup>4</sup>	2	1	0	0	0	0	0	0	0	0	0
Chicopee	674	934.4	166	180	48	12	54	37	20	24	11	4	3
Chilmark	8	863.1	3	1	1	0	2	0	0	0	0	0	0
Clarksburg	14	637.1	0	6	2	0	2	1	0	1	0	0	1
Clinton	129	910.2	32	37	8	3	4	6	4	4	0	0	1
Cohasset	74	850.6	27	13	3	0	5	4	1	3	0	0	0
Colrain	10	721.1	5	4	0	2	0	0	0	1	0	0	0
Concord	160	892.5	34	47	3	4	19	6	4	6	0	0	0
Conway	11	808.3	3	3	1	0	1	1	0	0	0	0	0
Cummington	4	-- <sup>4</sup>	1	0	0	0	0	0	0	0	0	0	0
Dalton	81	996.9	28	15	0	5	5	3	2	4	1	0	1
Danvers	269	986.8	81	67	17	5	14	14	2	10	2	0	1
Dartmouth	257	690.9	91	66	12	4	13	10	6	8	4	0	1

Table C-14A. Selected Causes of Death by Community, 1999 (continued)

COMMUNITY	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
Dedham	248	849.2	68	77	24	8	15	10	6	9	1	1	3
Deerfield	35	539.1	13	8	2	0	3	2	0	0	0	0	0
Dennis	243	784.6	52	69	13	3	14	21	2	7	1	0	0
Dighton	41	645.2	10	12	4	1	2	3	0	2	1	0	0
Douglas	37	627.2	14	6	0	1	1	2	1	1	1	0	1
Dover	31	583.8	11	6	1	0	2	2	1	1	0	0	0
Dracut	204	960.4	50	53	18	2	17	13	3	11	2	0	5
Dudley	94	959.1	27	27	11	3	3	4	3	0	2	0	0
Dunstable	8	1,290.2	3	3	0	1	1	0	0	0	0	0	0
Duxbury	123	895.8	25	29	4	0	8	6	3	11	0	0	2
East Bridgewater	97	1,094.4	30	23	8	2	4	3	4	2	0	0	2
East Brookfield	26	1,129.8	9	3	1	0	1	2	0	1	0	0	0
East Longmeadow	158	802.7	45	37	13	7	14	7	3	8	0	0	2
Eastham	59	758.8	6	17	6	2	4	7	2	1	2	0	0
Easthampton	153	887.5	39	39	10	3	11	10	1	8	2	1	2
Easton	131	800.0	36	29	6	3	16	11	4	2	0	0	2
Edgartown	28	737.8	8	6	1	1	3	4	0	1	1	0	0
Egremont	20	924.5	9	8	1	1	0	0	0	2	1	0	0
Erving	14	797.7	6	6	4	0	0	0	0	0	0	0	0
Essex	25	750.0	9	5	1	1	2	0	1	3	0	0	1
Everett	356	812.9	104	94	31	9	15	17	10	15	1	2	3
Fairhaven	213	991.2	65	47	9	5	19	10	4	11	1	0	0
Fall River	1,109	920.4	337	254	59	12	81	57	33	39	9	5	10
Falmouth	387	818.4	95	113	24	6	30	20	11	12	4	0	3
Fitchburg	439	913.3	111	102	28	10	34	23	17	11	5	0	0
Florida	8	956.5	2	4	1	1	0	1	0	0	0	0	0
Foxborough	128	843.3	32	30	7	1	6	2	2	1	5	0	2
Frammingham	533	762.5	125	136	27	23	36	24	11	38	1	0	2
Franklin	178	1,035.7	42	49	14	9	11	8	2	12	2	0	1
Freetown	40	525.0	8	7	1	1	4	3	1	0	2	0	1
Gardner	247	908.7	65	52	13	3	14	12	10	13	2	1	3
Gay Head (Aquinnah)	1	--	0	1	0	0	0	0	0	0	0	0	0
Georgetown	40	735.6	12	12	4	0	2	4	0	1	2	0	0
Gill	8	531.1	3	1	1	0	2	0	0	0	0	0	1
Gloucester	296	802.9	74	78	20	5	18	20	10	10	2	0	4
Goshen	7	747.4	2	2	1	0	0	1	0	1	0	0	0

Table C-14A. Selected Causes of Death by Community, 1999 (continued)

COMMUNITY	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
Gosnold	0	0.0	0	0	0	0	0	0	0	0	0	0	0
Grafton	111	796.3	27	34	9	4	5	3	3	3	1	0	0
Granby	46	928.4	15	9	0	1	1	0	2	0	0	0	0
Granville	7	512.3	4	1	0	0	0	0	0	0	0	0	0
Great Barrington	114	994.3	35	21	4	0	14	1	1	3	2	0	0
Greenfield	257	1,004.9	69	52	9	4	29	20	4	11	2	0	2
Groton	40	684.2	13	13	2	4	5	0	0	0	0	1	1
Groveland	42	935.9	11	12	6	1	4	2	3	0	0	0	0
Hadley	60	948.4	19	11	0	1	5	2	2	1	0	0	0
Halifax	62	791.2	14	17	3	2	5	4	3	6	0	0	0
Hamilton	35	511.0	7	10	4	0	7	1	0	3	0	0	0
Hampden	44	995.4	11	11	5	0	3	1	1	0	0	1	1
Hancock	6	1,965.7	2	1	0	0	0	2	0	0	0	0	0
Hanover	99	1,020.5	24	23	5	2	7	9	3	4	0	0	0
Hanson	60	790.3	15	14	0	0	6	2	3	4	1	1	3
Hardwick	32	1,077.4	10	10	3	0	1	1	2	0	1	0	1
Harvard	25	893.4	6	8	1	1	0	1	1	0	1	0	0
Harwich	201	802.6	49	54	14	3	22	4	7	3	2	0	0
Hatfield	32	822.9	11	6	0	1	3	0	3	1	0	0	0
Haverhill	569	984.5	150	137	32	16	39	44	20	22	9	1	2
Hawley	3	-- <sup>4</sup>	0	1	0	0	0	1	0	0	0	0	0
Heath	7	906.5	2	3	1	0	1	0	0	0	0	0	0
Hingham	187	849.8	62	42	12	3	18	6	3	10	2	0	1
Hinsdale	19	789.6	4	7	1	1	2	0	0	1	1	0	0
Holbrook	115	940.9	24	38	11	5	4	8	2	5	1	0	0
Holden	105	539.7	28	26	3	3	6	4	1	8	0	0	2
Holland	10	444.0	4	3	3	0	0	1	1	0	0	0	0
Holliston	78	1,007.2	30	21	4	3	4	3	0	3	1	0	1
Holyoke	557	1,167.4	158	113	28	10	42	33	22	22	3	7	5
Hopedale	58	871.3	16	8	2	1	5	0	1	8	0	0	3
Hopkinton	55	1,051.8	12	15	4	1	3	1	1	4	2	0	0
Hubbardston	19	847.3	2	3	1	1	2	2	1	2	0	0	1
Hudson	112	630.0	32	38	13	4	6	5	6	6	0	1	0
Hull	80	802.3	13	30	10	2	1	11	2	2	1	0	0



Table C-14A. Selected Causes of Death by Community, 1999 (continued)

COMMUNITY	Total Deaths	Age- adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
Huntington	12	605.1	3	1	0	0	1	0	0	0	2	0	0
Ipswich	128	842.4	38	35	13	3	6	10	1	4	0	0	0
Kingston	110	1,080.2	39	27	8	2	3	7	0	3	1	0	0
Lakeville	75	1,108.4	22	19	5	0	5	2	1	5	0	0	1
Lancaster	48	765.6	9	13	3	0	3	3	3	3	0	0	0
Lanesborough	18	524.1	5	5	1	1	2	1	0	1	0	0	0
Lawrence	517	753.2	144	103	24	7	26	29	17	18	11	3	3
Lee	81	1,091.5	20	18	6	3	4	5	4	4	2	0	0
Leicester	90	1,053.4	25	25	5	3	2	5	5	2	0	2	0
Lenox	98	989.4	30	19	2	2	8	6	3	5	0	0	0
Leominster	346	805.7	106	66	14	8	32	26	10	9	3	0	1
Leverett	5	316.9	4	1	0	0	0	0	0	0	0	0	0
Lexington	269	601.3	79	52	6	1	23	14	7	15	0	0	2
Leyden	5	704.5	4	1	0	0	0	0	0	0	0	0	0
Lincoln	34	503.7	10	9	2	0	1	1	1	2	0	0	0
Littleton	64	887.4	22	16	7	2	5	1	4	3	0	0	0
Longmeadow	203	1,161.4	48	42	10	4	14	2	4	11	2	0	0
Lowell	916	974.0	249	213	66	17	63	46	13	35	7	3	8
Ludlow	180	835.9	48	49	12	2	13	6	6	5	0	0	2
Lunenburg	58	634.2	19	16	3	1	7	1	1	2	1	0	1
Lynn	819	891.1	226	215	54	15	54	40	19	30	7	7	9
Lynnfield	75	507.6	13	27	11	0	8	5	5	1	0	0	0
Malden	496	768.6	136	125	42	12	24	27	14	13	5	2	1
Manchester	43	621.2	5	16	3	0	0	2	0	3	0	0	0
Mansfield	95	846.8	24	28	8	2	1	5	3	3	1	2	0
Marblehead	158	562.5	45	35	7	2	11	12	3	7	0	0	0
Marion	51	1,994.3	22	12	2	2	4	0	1	2	0	0	2
Marlborough	238	774.3	72	56	20	1	14	16	4	11	6	0	2
Marshfield	152	907.5	38	57	22	5	11	6	4	4	3	0	0
Mashpee	96	818.0	20	39	17	1	7	4	3	1	0	0	1
Mattapoisett	53	653.7	17	15	2	3	6	2	0	1	0	0	0
Maynard	64	573.9	16	22	3	2	2	4	2	1	0	0	1
Medfield	70	851.4	21	19	7	1	5	6	3	2	0	0	3
Medford	573	786.7	169	132	36	10	40	27	11	18	5	0	10
Medway	67	846.6	20	18	4	1	4	3	1	5	0	0	1
Melrose	300	786.3	92	68	14	9	23	16	9	11	2	1	1
Mendon	27	672.1	6	7	4	0	1	0	0	1	0	0	0

Table C-14A. Selected Causes of Death by Community, 1999 (continued)

COMMUNITY	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
Merrimac	34	631.2	11	13	3	0	0	4	0	1	0	0	0
Methuen	406	735.9	148	92	18	7	17	27	11	19	1	1	2
Middleborough	159	920.9	56	29	5	2	14	8	2	11	0	0	1
Middlefield	0	0.0	0	0	0	0	0	0	0	0	0	0	0
Middleton	32	568.1	10	11	3	0	1	0	1	0	2	0	0
Milford	216	815.2	65	54	24	8	12	6	1	10	1	0	2
Millbury	129	837.7	43	29	11	3	9	5	1	3	4	0	0
Millis	40	811.0	20	8	1	1	3	1	0	1	1	0	1
Millville	16	829.4	4	2	0	0	4	0	0	0	0	0	0
Milton	231	608.0	72	58	19	5	13	15	4	5	2	1	0
Monroe	2	--	0	1	0	0	0	1	0	0	0	0	0
Monson	50	746.2	14	13	6	2	3	2	3	3	0	0	1
Montague	85	885.1	23	20	3	2	1	7	2	8	2	0	1
Monterey	4	--	1	2	0	0	0	1	0	0	0	0	0
Montgomery	8	1,017.1	3	2	1	0	2	0	0	0	0	0	0
Mount Washington	1	--	0	0	0	0	0	0	0	0	0	0	0
Nahant	34	627.5	7	14	3	1	0	1	0	1	0	0	1
Nantucket	77	971.2	17	12	7	1	9	3	4	3	0	0	0
Natick	282	858.6	80	74	18	7	19	15	11	12	1	0	2
Needham	312	768.0	96	72	15	3	21	16	7	17	1	0	2
New Ashford	3	--	1	1	0	0	0	0	0	1	0	0	0
New Bedford	1,156	910.1	376	269	73	21	70	64	25	34	5	2	6
New Braintree	7	935.0	3	2	0	0	1	0	0	1	0	0	0
New Marlborough	15	839.0	3	5	1	0	0	3	0	1	0	0	0
New Salem	7	924.8	1	1	0	0	1	2	0	0	0	0	0
Newbury	40	644.9	15	7	0	1	4	3	2	0	0	0	2
Newburyport	166	859.3	43	38	14	3	11	7	2	3	0	0	0
Newton	661	617.4	192	184	40	14	47	20	15	25	1	1	4
Norfolk	27	706.0	10	6	1	0	2	3	0	1	0	0	0
North Adams	201	950.0	52	51	12	7	19	11	5	12	4	0	3
North Andover	229	1,134.2	70	57	17	4	13	12	6	10	1	1	1
North Attleboro	172	801.7	46	51	16	5	9	13	2	1	5	0	0
North Brookfield	37	730.5	7	16	4	2	3	3	0	1	0	0	1

Table C-14A. Selected Causes of Death by Community, 1999 (continued)

COMMUNITY	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
North Reading	88	826.1	22	26	9	1	6	5	4	1	1	0	0
Northampton	325	959.7	94	60	22	3	29	19	7	17	3	1	5
Northborough	81	885.5	20	25	6	2	5	2	1	1	0	0	1
Northbridge	163	1,025.6	43	20	6	1	11	9	9	26	1	0	1
Northfield	37	938.3	14	12	2	1	1	1	4	2	0	0	0
Norton	95	909.4	25	26	5	2	5	4	0	6	2	0	3
Norwell	80	1,593.3	26	22	5	0	4	6	1	2	2	0	0
Norwood	316	839.7	74	82	25	2	29	12	9	12	2	1	2
Oak Bluffs	39	1,002.0	7	9	1	3	4	1	2	1	0	0	0
Oakham	9	707.1	2	2	0	0	0	1	0	0	0	0	0
Orange	69	807.7	22	14	2	2	3	6	1	2	0	0	0
Orleans	104	656.9	26	25	5	5	8	5	2	4	0	0	0
Otis	10	1,030.3	1	4	0	0	1	1	0	0	1	0	0
Oxford	126	1,024.2	33	35	4	5	2	6	3	4	0	0	0
Palmer	125	837.5	32	32	2	0	3	6	4	6	1	0	3
Paxton	29	594.7	8	9	1	1	1	2	0	2	0	0	0
Peabody	500	845.4	132	156	46	9	32	25	6	16	5	1	2
Peiham	13	973.8	2	2	0	0	1	0	0	1	0	1	0
Pembroke	87	752.0	23	33	13	1	3	0	1	2	1	0	0
Pepperell	41	631.4	9	11	3	0	2	5	0	0	1	0	0
Peru	0	0.0	0	0	0	0	0	0	0	0	0	0	0
Petersham	13	723.6	2	4	0	1	5	0	0	0	0	0	0
Phillipston	4	-- <sup>4</sup>	1	1	0	0	1	1	0	0	0	0	0
Pittsfield	553	839.6	149	132	38	9	34	43	15	17	3	0	6
Plainfield	6	1,003.2	2	1	1	0	0	0	1	0	0	0	0
Plainville	46	571.1	12	17	7	3	1	4	0	0	0	0	0
Plymouth	401	797.5	128	111	27	7	25	25	5	10	0	1	2
Plympton	11	558.8	5	3	1	0	0	0	0	0	1	0	0
Princeton	14	873.9	4	3	1	1	2	0	0	1	0	0	0
Provincetown	55	984.3	16	13	0	3	3	4	0	2	1	0	0
Quincy	892	848.9	224	235	67	12	60	31	16	44	8	1	11
Randolph	279	743.8	97	77	30	5	10	9	4	11	1	0	1
Raynham	92	984.5	36	27	7	3	6	1	1	2	0	0	1
Reading	195	780.9	51	63	18	3	13	9	3	5	1	0	2
Rehoboth	52	656.6	17	18	5	3	3	0	0	0	0	0	1
Revere	529	1,085.5	149	155	54	12	38	26	10	14	1	1	3
Richmond	6	296.7	2	1	0	0	1	0	0	0	0	0	0
Rochester	20	523.7	5	7	3	1	1	2	0	0	1	0	0

Table C-14A. Selected Causes of Death by Community, 1999 (continued)

COMMUNITY	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
Rockland	154	950.2	38	42	15	8	8	9	2	4	3	0	0
Rockport	83	522.6	26	16	1	0	11	1	2	5	0	0	1
Rowe	4	-- <sup>4</sup>	1	1	0	0	1	0	0	0	0	0	0
Rowley	56	1,383.4	16	13	3	0	4	5	5	1	2	0	1
Royalston	9	851.4	3	0	0	0	0	1	0	0	1	0	1
Russell	16	1,034.3	5	4	2	0	2	2	0	0	0	0	0
Rutland	37	839.1	12	14	2	2	2	2	1	0	0	0	0
Salem	367	822.6	110	94	29	2	25	16	9	16	2	0	0
Salisbury	61	975.7	23	11	2	1	6	1	1	0	1	0	1
Sandisfield	8	727.7	3	1	0	0	0	2	0	1	0	0	0
Sandwich	126	560.5	39	29	2	0	13	5	1	2	2	0	0
Saugus	302	931.5	88	83	21	5	21	16	4	14	1	0	2
Savoy	4	-- <sup>4</sup>	2	1	0	0	0	1	0	0	0	0	0
Scituate	173	901.5	53	42	11	4	8	11	1	10	0	0	0
Seekonk	112	744.5	36	33	8	3	6	4	2	1	1	0	2
Sharon	89	550.5	28	21	4	1	4	1	0	6	1	0	2
Sheffield	34	881.8	10	11	4	0	1	3	0	0	1	0	1
Shelburne	21	659.9	7	2	0	1	2	0	1	3	0	0	0
Sherborn	20	565.3	6	7	1	1	1	0	1	0	0	0	0
Shirley	38	827.6	7	10	3	1	2	5	1	2	0	0	0
Shrewsbury	232	878.3	58	60	17	7	19	13	2	8	2	0	2
Shutesbury	5	385.2	2	2	0	0	15	0	1	0	0	0	0
Somerset	194	732.5	47	53	10	2	15	8	3	7	2	0	1
Somerville	564	771.9	149	165	54	8	36	35	16	17	3	0	1
South Hadley	163	736.5	56	41	12	5	18	8	4	7	1	0	1
Southampton	34	762.9	13	7	2	0	1	4	1	1	0	0	0
Southborough	41	721.7	13	8	1	0	1	0	1	1	2	0	1
Southbridge	192	816.0	65	41	7	3	16	7	7	5	5	0	0
Southwick	61	915.8	18	17	3	1	2	3	0	6	1	0	0
Spencer	98	853.9	23	27	9	1	4	5	4	4	3	0	0
Springfield	1,469	965.8	383	302	72	20	105	65	38	66	8	7	9
Sterling	41	737.9	10	9	3	1	5	6	1	0	0	0	0
Stockbridge	26	737.3	6	7	0	1	1	2	0	1	1	0	0
Stoneham	235	750.2	58	70	21	9	11	13	4	9	0	1	2
Stoughton	241	786.5	73	52	21	1	14	12	9	20	3	0	0
Stow	21	573.9	5	5	1	1	1	1	0	1	1	0	0
Sturbridge	60	775.1	18	16	2	1	5	4	1	2	0	0	0
Sudbury	86	971.6	23	24	1	1	7	6	3	5	0	0	0

Table C-14A. Selected Causes of Death by Community, 1999 (continued)

COMMUNITY	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
Sunderland	16	723.3	4	5	1	2	0	0	1	0	0	0	2
Sutton	43	748.8	13	11	5	1	4	5	0	2	0	1	0
Swampscott	172	856.3	56	41	10	2	16	4	4	11	1	0	0
Swansea	112	605.6	30	33	10	2	4	11	2	1	0	0	0
Taunton	515	896.7	150	144	48	7	28	23	13	28	6	0	2
Templeton	72	1,030.1	23	14	5	1	2	9	1	5	1	0	0
Tewksbury	230	924.7	59	56	21	3	11	10	7	10	3	0	2
Tisbury	49	925.4	20	8	1	3	3	2	1	2	0	0	0
Tolland	2	-- <sup>4</sup>	0	1	0	0	0	1	0	0	0	0	0
Topsfield	40	413.9	13	11	3	0	2	6	1	1	0	0	0
Townsend	43	773.4	8	13	1	0	3	2	1	1	1	0	0
Truro	22	744.0	4	8	1	0	1	1	0	1	0	0	0
Tyngsborough	66	1,189.4	14	23	7	2	7	2	1	3	0	0	1
Tyringham	3	-- <sup>4</sup>	1	0	0	0	0	0	1	0	0	0	0
Upton	39	823.9	9	13	3	0	0	3	2	3	1	0	0
Uxbridge	60	525.3	12	14	6	3	4	9	1	6	1	0	1
Wakefield	233	692.0	68	69	9	5	14	13	4	7	1	0	1
Wales	13	1,880.1	4	4	2	0	0	0	0	0	1	0	1
Walpole	180	1,132.1	46	46	9	7	11	12	4	8	1	0	2
Waltham	485	759.9	123	123	21	11	35	24	15	20	5	2	3
Ware	93	809.7	34	16	4	0	1	9	2	3	0	1	1
Wareham	242	951.3	74	55	17	4	11	13	9	11	1	0	1
Warren	33	710.8	11	7	1	0	1	5	1	0	0	0	0
Warwick	8	1,164.0	1	1	0	0	1	1	0	0	0	0	1
Washington	3	-- <sup>4</sup>	0	1	0	1	0	0	0	1	0	0	0
Watertown	293	748.3	77	72	15	9	26	9	9	11	1	0	1
Wayland	89	803.0	29	24	3	4	9	3	3	5	1	0	0
Webster	171	742.3	52	39	6	3	11	7	5	7	1	1	2
Wellesley	219	648.4	59	58	7	5	15	3	5	12	0	2	1
Wellesley Wellfleet	27	549.7	8	6	2	0	1	4	0	0	0	0	0
Wendell	1	-- <sup>4</sup>	1	0	0	0	0	0	0	0	0	0	0
Wenham	34	622.2	12	8	3	0	2	3	1	2	0	0	0
West Boylston	74	906.4	25	14	4	2	7	4	2	2	0	0	1
West Bridgewater	65	841.4	17	15	2	2	6	5	2	1	3	0	0
West Brookfield	40	797.2	13	6	2	0	3	2	0	0	1	0	0
West Newbury	13	538.2	3	5	2	0	0	2	3	0	0	0	0

Table C-14A. Selected Causes of Death by Community, 1999 (continued)

COMMUNITY	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
West Springfield	303	860.1	76	69	22	6	13	13	5	12	3	0	4
West Stockbridge	15	699.6	7	4	2	0	1	0	1	0	0	0	0
West Tisbury	6	310.5	2	3	0	1	1	0	0	0	0	0	0
Westborough	159	1,015.3	28	42	5	5	9	8	4	15	1	0	1
Westfield	356	723.9	114	95	29	1	13	26	6	11	5	0	6
Westford	98	911.9	27	30	6	2	2	3	1	4	2	0	2
Westhampton	14	1,660.8	4	7	3	1	0	0	1	0	0	0	0
Westminster	47	819.9	15	5	3	0	3	2	1	1	0	0	0
Weston	105	800.2	26	28	3	3	8	7	2	4	0	0	0
Westport	129	745.7	44	36	11	2	5	4	5	1	5	0	1
Westwood	158	1,534.0	48	42	12	2	11	7	3	8	0	1	0
Weymouth	515	861.5	150	127	40	10	28	32	12	24	2	0	9
Whately	15	912.6	3	6	1	0	1	0	0	2	0	1	0
Whitman	97	815.5	25	29	10	1	3	4	3	1	1	1	1
Wilbraham	114	808.1	29	26	8	1	5	3	3	2	0	0	1
Williamsburg	21	781.6	2	14	2	0	3	0	1	1	0	0	0
Williamstown	85	653.7	26	15	4	1	7	3	2	6	1	0	0
Wilmington	154	2,624.5	42	38	15	2	10	8	4	5	0	0	0
Winchendon	62	701.6	15	17	6	0	6	6	1	1	0	0	1
Winchester	192	718.1	55	46	14	4	25	9	4	4	0	0	1
Windsor	6	645.1	2	2	0	0	0	0	0	0	0	0	1
Winthrop	214	900.0	54	66	17	7	14	7	4	8	0	0	1
Woburn	351	930.1	92	99	30	4	30	24	14	11	3	0	6
Worcester	1,845	957.9	555	375	102	20	94	96	44	79	14	8	17
Worthington	4	--	2	1	0	0	0	1	0	0	0	0	0
Wrentham	82	998.5	18	22	4	3	4	5	4	1	0	0	0
Yarmouth	372	699.5	105	100	24	6	31	17	9	7	1	0	3

1. All rates are age adjusted using the 2000 US standard population. 2. Includes only female breast cancer. 3. The title of this cause of death changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 4. Age-adjusted rates based on fewer than five events are excluded.

**Table C-14B. Selected Causes of Death by Community Health Network Area (CHNA), 1999**

CHNA (Name and Number)	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
<b>Massachusetts</b>	<b>55,763</b>	<b>815.9</b>	<b>15,539</b>	<b>13,852</b>	<b>3,592</b>	<b>1,048</b>	<b>3,573</b>	<b>2,857</b>	<b>1,327</b>	<b>2,176</b>	<b>433</b>	<b>128</b>	<b>430</b>
Community Health Network of Berkshire (1)	1,623	854.9	475	333	90	34	113	98	36	70	20	0	15
Upper Valley Health Web (Franklin County) (2)	832	801.8	240	198	34	19	65	56	19	35	4	2	10
Partnership for Health in Hampshire County (Northampton) (3)	1,182	821.3	356	250	67	16	80	68	35	50	7	4	10
The Community Health Connection (Springfield) (4)	2,918	911.6	770	642	172	48	190	127	68	132	17	8	27
Community Health Network of Southern Worcester County (5)	1,041	833.6	301	251	56	21	61	57	31	31	17	1	6
Community Partners for Health (Milford) (6)	1,055	822.8	290	238	77	32	63	50	19	80	10	1	13
Community Health Network of Greater Metro West (Framingham) (7)	2,505	786.9	667	666	150	71	151	124	62	120	24	1	22
Community Wellness Coalition (Worcester) (8)	2,806	871.9	830	614	159	45	152	144	62	118	21	10	23
Fitchburg/Gardner Community Health Network (9)	1,997	810.5	532	479	119	40	141	125	58	60	19	1	14
Greater Lowell Community Health Network (10)	2,036	937.4	540	508	151	43	132	102	38	75	21	3	24
Greater Lawrence Community Health Network (11)	1,418	775.6	439	326	79	24	76	84	40	55	18	5	8
Greater Haverhill Community Health Network (12)	1,214	912.4	332	293	78	22	77	89	45	30	16	1	11
Community Health Network North (Beverly/Gloucester) (13)	1,104	756.4	304	272	72	14	79	66	27	50	3	0	8
North Shore Community Health Network (14)	2,696	817.4	758	732	198	41	181	133	52	106	18	8	16
Greater Woburn/Concord/Littleton Community Health Network (15)	1,622	808.7	424	427	102	28	135	77	45	65	4	0	13
North Suburban Health Alliance (Medford/Malden/Melrose) (16)	2,476	765.0	700	647	180	58	146	127	59	79	16	6	20
Greater Cambridge/Somerville Community Health Network (17)	2,185	726.6	593	571	142	45	143	91	56	88	8	1	11
West Suburban Health Network (Newton/Waltham) (18)	2,219	717.3	623	590	123	46	154	89	54	96	8	7	14
Alliance for Community Health (Boston/Chelsea/Revere/Vinthrop) (19)	5,946	887.0	1,562	1,439	394	108	337	275	136	230	25	34	39
Blue Hills Community Health Alliance (Greater Quincy) (20)	3,577	827.9	1,000	918	271	55	220	169	63	167	24	3	32
Four (For) Communities (Holyoke, Chicopee, Ludlow, Westfield) (21)	1,788	918.8	494	440	117	25	123	102	54	62	21	11	16
Greater Brockton Community Health Network (22)	1,858	816.9	527	443	123	30	114	107	54	69	23	10	14
South Shore Community Partners in Prevention (Plymouth) (23)	1,369	861.3	378	402	112	29	83	75	25	50	11	2	9
Greater Attleboro-Taunton Health & Education Response (24)	1,771	853.4	531	470	130	34	103	79	35	72	23	2	18
Partners for a Healthier Community (Fall River) (25)	1,544	834.4	458	376	90	18	105	80	43	48	16	5	11
Greater New Bedford Health & Human Services Coalition (26)	2,101	833.2	680	492	122	42	134	108	47	68	15	2	12
Cape Cod & Islands Community Health Network (27)	2,880	730.4	735	785	184	60	215	155	64	70	24	0	14

1. All rates are age adjusted using the 2000 US standard population. 2. Includes only female breast cancer. 3. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title).

Table C-14C. Selected Causes of Death by County, 1999

County	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
Massachusetts	55,763	815.9	15,539	13,852	3,592	1,048	3,573	2,857	1,327	2,176	433	128	430
Barnstable	2,672	726.5	678	745	173	51	193	145	57	63	23	0	14
Berkshire	1,623	854.9	475	383	90	34	113	98	36	70	20	0	15
Bristol	4,947	826.9	1,509	1,230	314	85	317	251	116	160	52	9	38
Dukes	131	772.6	40	28	4	8	13	7	3	4	1	0	0
Essex	6,432	811.3	1,833	1,623	427	101	413	372	164	241	55	14	43
Franklin	681	807.7	202	168	32	17	50	43	14	32	3	2	8
Hampden	4,746	910.6	1,275	1,093	294	74	316	232	125	195	38	19	44
Hampshire	1,194	818.4	359	251	67	16	81	68	35	50	9	4	10
Middlesex	11,488	767.3	3,106	3,005	756	257	768	547	275	450	74	14	89
Nantucket	77	971.2	17	12	7	1	9	3	4	3	0	0	0
Norfolk	5,727	779.0	1,598	1,463	403	117	350	261	115	272	42	7	51
Plymouth	3,824	849.8	1,110	995	268	71	230	209	82	144	34	12	29
Suffolk	5,541	935.3	1,451	1,345	377	92	311	256	129	207	23	34	35
Worcester	6,680	834.5	1,886	1,511	380	124	409	365	172	285	59	13	54

1 All rates are age adjusted using the 2000 US standard population. 2 Includes only female breast cancer. 3. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title).



TABLE C-15  
RESIDENT DEATHS BY CAUSE, SEX, AND RACE  
1999

ICD CODE	Cause of Death	TOTALS		WHITE		BLACK		OTHER	
		TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM
A04	Other bacterial intestinal infections	53	24 29	51 23 28	2 1 1	0 0 0	0 0 0	0 0 0	0 0 0
A08	Viral and other specified intestinal infections	3	2 1	3 2 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
A16	Respiratory tuberculosis, not confirmed bacteriologically or histologically	6	3 3	5 3 2	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
A18	Tuberculosis of other organs	1	0 1	1 0 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
A19	Miliary tuberculosis	1	0 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
A31	Infection due to other mycobacteria	2	1 1	2 1 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
A39	Meningococcal infection	3	0 3	2 0 2	0 0 0	1 0 1	0 0 0	0 0 0	0 0 0
A40	Streptococcal septicemia	11	7 4	11 7 4	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
A41	Other septicemia	883	385 498	824 356 468	49 25 24	0 0 0	0 0 0	0 0 0	0 0 0
A48	Other bacterial diseases, not elsewhere classified	4	0 4	4 0 4	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
A49	Bacterial infection of unspecified site	46	26 20	44 25 19	2 1 1	0 0 0	0 0 0	0 0 0	0 0 0
A74	Other diseases caused by chlamydiae	1	0 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
A81	Atypical virus infections of central nervous system	8	2 6	7 2 5	1 0 1	0 0 0	0 0 0	0 0 0	0 0 0
A86	Unspecified viral encephalitis	2	1 1	2 1 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
A87	Viral meningitis	1	0 1	1 0 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
B00	Herpes-viral [herpes simplex] infections	5	2 3	5 2 3	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
B01	Varicella [chickenpox]	1	1 0	0 0 0	1 1 0	0 0 0	0 0 0	0 0 0	0 0 0
B02	Zoster [herpes zoster]	9	5 4	8 5 3	1 0 1	0 0 0	0 0 0	0 0 0	0 0 0
B15	Acute hepatitis A	2	0 2	2 0 2	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
B16	Acute hepatitis B	12	9 3	9 8 1	1 1 0	0 0 0	0 0 0	0 0 0	0 0 0
B17	Other acute viral hepatitis	28	18 10	27 17 10	1 1 0	0 0 0	0 0 0	0 0 0	0 0 0
B18	Chronic viral hepatitis	2	2 0	2 2 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
B19	Unspecified viral hepatitis	1	0 1	1 0 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
B20	Human immunodeficiency virus [HIV] disease resulting in infectious and parasitic diseases	86	58 28	67 48 19	18 9 9	0 0 0	0 0 0	0 0 0	0 0 0
B21	Human immunodeficiency virus [HIV] disease resulting in malignant neoplasms	33	27 6	28 23 5	5 4 1	0 0 0	0 0 0	0 0 0	0 0 0
B22	Human immunodeficiency virus [HIV] disease resulting in other specified diseases	21	17 4	17 13 4	4 4 0	0 0 0	0 0 0	0 0 0	0 0 0
B23	Human immunodeficiency virus [HIV] disease resulting in other conditions	54	37 17	39 28 11	14 8 6	1 1 0	0 0 0	0 0 0	0 0 0
B24	Unspecified human immunodeficiency virus [HIV] disease	48	38 10	37 30 7	11 8 3	0 0 0	0 0 0	0 0 0	0 0 0
B25	Cytomegaloviral disease	1	0 1	1 0 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
B34	Viral infection of unspecified site	12	3 9	12 3 9	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
B37	Candidiasis	4	3 1	3 2 1	1 1 0	0 0 0	0 0 0	0 0 0	0 0 0
B44	Aspergillosis	4	2 2	4 2 2	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
B45	Cryptococcosis	1	1 0	0 0 0	1 1 0	0 0 0	0 0 0	0 0 0	0 0 0
B46	Zygomycosis	1	0 1	1 0 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
B49	Unspecified mycosis	19	7 12	17 7 10	2 0 2	0 0 0	0 0 0	0 0 0	0 0 0
B59	Pneumocystosis	3	1 2	3 1 2	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
B90	Sequelae of tuberculosis	6	1 5	5 1 4	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
B91	Sequelae of poliomyelitis	5	4 1	5 4 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
B94	Sequelae of other and unspecified infectious and parasitic disease	90	63 27	78 55 23	11 7 4	1 1 0	0 0 0	0 0 0	0 0 0
B99	Other and unspecified infectious diseases	1	1 0	1 1 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
C00	Malignant neoplasm of lip	2	2 0	2 2 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0

TABLE C-15 1999

ICD CODE	Cause of Death	TOTALS				WHITE				BLACK				OTHER			
		TOT		MALE		TOT		MALE		TOT		MALE		TOT		MALE	
		2	1	2	FEM	2	1	2	FEM	2	1	2	FEM	2	1	2	FEM
C01	Malignant neoplasm of base of tongue	51	33	18	0	49	31	18	0	1	1	0	0	1	1	0	0
C02	Malignant neoplasm of other and unspecified parts of tongue	2	1	1	1	1	0	1	1	1	1	0	0	0	0	0	0
C03	Malignant neoplasm of gum	2	1	1	1	2	1	1	1	0	0	0	0	0	0	0	0
C04	Malignant neoplasm of floor of mouth	6	4	2	2	5	3	2	2	0	0	0	0	1	1	0	0
C05	Malignant neoplasm of palate	21	9	12	12	20	8	12	12	1	1	0	0	0	0	0	0
C06	Malignant neoplasm of other and unspecified parts of mouth	15	11	4	4	15	11	4	4	0	0	0	0	0	0	0	0
C07	Malignant neoplasm of parotid gland	3	2	1	1	3	2	1	1	0	0	0	0	0	0	0	0
C08	Malignant neoplasm of other and unspecified major salivary glands	13	6	7	7	12	5	7	7	1	1	0	0	0	0	0	0
C09	Malignant neoplasm of tonsil	18	13	5	5	16	12	4	4	1	1	0	0	1	1	0	1
C10	Malignant neoplasm of oropharynx	18	12	6	6	16	10	6	6	0	0	0	0	2	2	0	0
C11	Malignant neoplasm of nasopharynx	2	2	0	0	2	2	0	0	0	0	0	0	0	0	0	0
C12	Malignant neoplasm of pyriform sinus	6	6	0	0	6	6	0	0	0	0	0	0	0	0	0	0
C13	Malignant neoplasm of hypopharynx	33	21	12	12	33	21	12	12	0	0	0	0	0	0	0	0
C14	Malignant neoplasm of other and ill-defined sites in the lip, oral cavity, and pharynx	350	273	77	77	326	253	73	73	22	18	4	4	2	2	0	0
C15	Malignant neoplasm of esophagus	332	189	143	143	306	173	133	133	16	9	7	7	10	7	3	3
C16	Malignant neoplasm of stomach	19	12	7	7	18	11	7	7	1	1	0	0	0	0	0	0
C17	Malignant neoplasm of small intestine	1,281	596	685	685	1,220	574	646	646	51	19	32	32	10	3	7	7
C18	Malignant neoplasm of colon	43	28	15	15	42	28	14	14	1	0	1	1	0	0	0	0
C19	Malignant neoplasm of rectosigmoid junction	192	95	97	97	178	85	93	93	9	7	2	2	5	3	2	2
C20	Malignant neoplasm of rectum	11	6	5	5	11	6	5	5	0	0	0	0	0	0	0	0
C21	Malignant neoplasm of anus and anal canal	277	184	93	93	240	160	80	80	12	9	3	3	25	15	10	10
C22	Malignant neoplasm of liver and intrahepatic bile ducts	54	15	39	39	50	13	37	37	3	1	2	2	1	1	0	0
C23	Malignant neoplasm of gallbladder	39	15	24	24	39	15	24	24	0	0	0	0	0	0	0	0
C24	Malignant neoplasm of other and unspecified parts of biliary tract	745	340	405	405	712	321	391	391	31	18	13	13	2	1	1	1
C25	Malignant neoplasm of pancreas	44	19	25	25	42	18	24	24	2	1	1	1	0	0	0	0
C26	Malignant neoplasm of other and ill-defined digestive organs	8	4	4	4	8	4	4	4	0	0	0	0	0	0	0	0
C31	Malignant neoplasm of accessory sinuses	100	82	18	18	92	77	15	15	6	4	2	2	2	1	1	1
C32	Malignant neoplasm of larynx	2	2	0	0	2	2	0	0	0	0	0	0	0	0	0	0
C33	Malignant neoplasm of trachea	3,590	2,004	1,586	1,586	3,424	1,902	1,522	1,522	130	80	50	50	36	22	14	14
C34	Malignant neoplasm of bronchus and lung	5	3	2	2	3	1	2	2	0	0	0	0	2	2	0	0
C37	Malignant neoplasm of thymus	7	4	3	3	6	3	3	3	0	0	0	0	1	1	0	0
C38	Malignant neoplasm of heart, mediastinum, and pleura	2	0	2	2	2	0	2	2	0	0	0	0	0	0	0	0
C39	Malignant neoplasm of other and ill-defined sites in the respiratory system and intrathoracic organs	3	2	1	1	2	2	0	0	1	0	1	1	0	0	0	0
C40	Malignant neoplasm of bone and articular cartilage of limbs	18	12	6	6	17	11	6	6	1	1	0	0	0	0	0	0
C41	Malignant neoplasm of bone and articular cartilage of other and unspecified sites	181	111	70	70	181	111	70	70	0	0	0	0	0	0	0	0
C43	Malignant melanoma of skin	51	38	13	13	49	37	12	12	2	1	1	1	0	0	0	0
C44	Other malignant neoplasms of skin	76	68	8	8	73	66	7	7	2	1	1	1	1	1	0	0
C45	Mesothelioma	4	3	1	1	4	3	1	1	0	0	0	0	0	0	0	0
C46	Kaposi's sarcoma	1	0	1	1	1	0	1	1	0	0	0	0	0	0	0	0
C47	Malignant neoplasm of peripheral nerves and autonomic nervous system	8	2	6	6	5	1	4	4	2	0	2	2	1	1	0	0
C48	Malignant neoplasm of retroperitoneum and peritoneum	91	41	50	50	87	41	46	46	4	0	4	4	0	0	0	0
C49	Malignant neoplasm of other connective and soft tissue																

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ICD CODE	Cause of Death	TOTALS		WHITE		BLACK		OTHER	
		TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM
C50	Malignant neoplasm of breast	1,053	5	1,048	4	1,011	27	10	0
C51	Malignant neoplasm of vulva	26	0	26	0	0	0	0	0
C52	Malignant neoplasm of vagina	8	0	8	0	0	0	0	0
C53	Malignant neoplasm of cervix uteri	64	0	64	0	54	0	3	0
C54	Malignant neoplasm of corpus uteri	86	0	86	0	81	0	0	0
C55	Malignant neoplasm of uterus, part unspecified	75	0	75	0	71	0	0	0
C56	Malignant neoplasm of ovary	334	0	334	0	321	0	2	0
C57	Malignant neoplasm of other and unspecified female genital organs	12	0	12	0	10	0	0	0
C60	Malignant neoplasm of penis	5	5	0	4	0	0	0	0
C61	Malignant neoplasm of prostate	801	801	0	764	0	0	1	1
C62	Malignant neoplasm of testis	11	11	0	11	0	31	6	0
C63	Malignant neoplasm of other and unspecified male genital organs	1	1	0	1	0	0	0	0
C64	Malignant neoplasm of kidney, except renal pelvis	267	147	120	142	117	4	0	0
C65	Malignant neoplasm of renal pelvis	3	2	1	3	2	0	0	0
C66	Malignant neoplasm of ureter	5	3	2	5	2	0	0	0
C67	Malignant neoplasm of bladder	349	238	111	334	231	103	1	0
C68	Malignant neoplasm of other and unspecified urinary organs	4	2	2	4	2	0	0	0
C69	Malignant neoplasm of eye and adnexa	4	3	1	4	3	0	0	0
C70	Malignant neoplasm of meninges	3	1	2	2	1	0	0	0
C71	Malignant neoplasm of brain	298	165	133	294	163	131	1	0
C72	Malignant neoplasm of spinal cord, cranial nerves, and other parts of central nervous system	3	1	2	3	1	2	1	0
C73	Malignant neoplasm of thyroid gland	32	12	20	30	11	19	0	0
C74	Malignant neoplasm of adrenal gland	9	3	6	9	3	6	1	0
C75	Malignant neoplasm of other endocrine glands and related structures	2	1	1	2	1	0	0	0
C76	Malignant neoplasm of other and ill-defined sites	99	46	53	95	45	50	0	0
C78	Secondary malignant neoplasm of respiratory and digestive organs	95	46	49	89	43	46	2	1
C79	Secondary malignant neoplasm of other sites	61	26	35	60	26	34	3	1
C80	Malignant neoplasm without specification of site	882	419	463	832	393	439	1	0
C81	Hodgkin's disease	49	27	22	47	25	22	13	4
C82	Follicular [nodular] non-Hodgkin's lymphoma	2	2	0	1	1	0	0	0
C83	Diffuse non-Hodgkin's lymphoma	54	31	23	47	25	22	1	1
C84	Peripheral and cutaneous T-cell lymphomas	15	7	8	15	7	8	0	0
C85	Other and unspecified types of non-Hodgkin's lymphoma	519	250	269	504	245	259	0	0
C88	Malignant immunoproliferative diseases	13	6	7	13	6	7	0	0
C90	Multiple myeloma and malignant plasma cell neoplasms	239	120	119	215	107	108	2	1
C91	Lymphoid leukemia	144	76	68	139	72	67	3	1
C92	Myeloid leukemia	215	106	109	209	103	106	1	1
C93	Monocytic leukemia	6	4	2	5	3	2	0	0
C94	Other leukemias of specified cell type	1	1	0	1	1	0	0	0
C95	Leukemia of unspecified cell type	158	85	73	153	84	69	0	0
C97	Malignant neoplasms of independent (primary) multiple sites	117	74	43	112	70	42	2	0
D03	Melanoma in situ	1	1	0	1	1	0	1	0
D13	Benign neoplasm of other and ill-defined parts of digestive system	1	0	1	0	0	0	0	0

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ICD CODE	Cause of Death	TOTALS		WHITE		BLACK		OTHER	
		TOT	FEM	TOT	FEM	TOT	FEM	TOT	FEM
		MALE	FEM	MALE	FEM	MALE	FEM	MALE	FEM
D15	Benign neoplasm of other and unspecified intrathoracic organs	3	0	1	0	2	0	0	0
D18	Hemangioma and lymphangioma, any site	3	1	3	1	0	0	0	0
D23	Other benign neoplasms of skin	2	1	2	1	0	0	0	0
D32	Benign neoplasm of meninges	21	12	21	12	0	0	0	0
D33	Benign neoplasm of brain and other parts of central nervous system	2	1	2	1	0	0	0	0
D35	Benign neoplasm of other and unspecified endocrine glands	3	0	3	0	0	0	0	0
D36	Benign neoplasm of other and unspecified sites	1	0	1	0	0	0	0	0
D37	Neoplasm of uncertain or unknown behavior of oral cavity and digestive organs	28	14	26	13	2	1	0	0
D38	Neoplasm of uncertain or unknown behavior of middle ear and respiratory and intrathoracic organs	16	5	15	4	1	1	0	0
D39	Neoplasm of uncertain or unknown behavior of female genital organs	3	3	3	3	0	0	0	0
D40	Neoplasm of uncertain or unknown behavior of male genital organs	1	0	1	0	0	0	0	0
D41	Neoplasm of uncertain or unknown behavior of urinary organs	6	2	6	2	0	0	0	0
D43	Neoplasm of uncertain or unknown behavior of brain and central nervous system	106	61	101	57	4	3	1	0
D44	Neoplasm of uncertain or unknown behavior of endocrine glands	2	2	2	2	0	0	0	0
D45	Polycythemia vera	16	4	16	4	0	0	0	0
D46	Myelodysplastic syndromes	102	46	99	54	2	1	0	0
D47	Other neoplasms of uncertain or unknown behavior of lymphoid, hematopoietic and related tissue	56	34	55	34	1	0	0	0
D48	Neoplasm of uncertain or unknown behavior of other and unspecified sites	22	17	21	16	1	1	0	0
D50	Iron deficiency anemia	3	2	3	2	0	0	0	0
D51	Vitamin B12 deficiency anemia	2	0	2	0	0	0	0	0
D53	Other nutritional anemias	1	1	1	1	0	0	0	0
D57	Sickle-cell disorders	4	2	0	0	4	2	0	0
D58	Other hereditary hemolytic anemias	6	6	6	6	0	0	0	0
D59	Acquired hemolytic anemia	8	6	8	6	0	0	0	0
D61	Other aplastic anemias	21	12	19	10	2	2	0	0
D64	Other anemias	75	50	72	48	3	2	0	0
D65	Disseminated intravascular coagulation [defibrination syndrome]	13	6	12	5	1	1	0	0
D66	Hereditary factor VIII deficiency	2	0	1	0	1	0	0	0
D67	Hereditary factor IX deficiency	1	1	1	1	0	0	0	0
D68	Other coagulation defects	19	12	17	10	2	2	0	0
D69	Purpura and other hemorrhagic conditions	17	8	16	8	1	1	0	0
D70	Agranulocytosis	8	5	8	5	0	0	0	0
D72	Other disorders of white blood cells	1	0	1	0	0	0	0	0
D73	Diseases of spleen	6	1	5	1	1	1	0	0
D75	Other diseases of blood and blood-forming organs	4	2	3	2	1	1	0	0
D76	Certain diseases involving lymphoreticular tissue and reticulohistiocytic system	1	0	0	0	1	1	0	0
D80	Immunodeficiency with predominantly antibody defects	1	1	1	1	0	0	0	0
D81	Combined immunodeficiencies	1	0	1	0	0	0	0	0
D82	Immunodeficiency associated with other major defects	1	0	1	0	0	0	0	0
D83	Common variable immunodeficiency	3	3	2	2	1	1	0	0
D84	Other immunodeficiencies	11	8	8	6	2	1	1	1

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ICD CODE	Cause of Death	TOTALS		WHITE		BLACK		OTHER	
		TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM
D86	Sarcoidosis	4	2 2	1	0 1	3	2 1	0	0 0
D89	Other disorders involving the immune mechanism, not elsewhere classified	2	1 1	2	1 1	0	0 0	0	0 0
E03	Other hypothyroidism	32	5 27	32	5 27	0	0 0	0	0 0
E04	Other nontoxic goiter	2	1 1	2	1 1	0	0 0	0	0 0
E05	Thyrotoxicosis [hyperthyroidism]	9	2 7	8	2 6	1	0 1	0	0 0
E07	Other disorders of thyroid	3	0 3	2	0 2	1	0 1	0	0 0
E10	Insulin-dependent diabetes mellitus	141	63 78	132	61 71	7	2 5	2	0 2
E11	Nonsulin-dependent diabetes mellitus	125	63 62	118	58 60	6	4 2	1	1 0
E14	Unspecified diabetes mellitus	1,061	513 548	983	481 502	68	28 40	10	4 6
E16	Other disorders of pancreatic internal secretion	2	0 2	2	0 2	0	0 0	0	0 0
E22	Hyperfunction of pituitary gland	1	0 1	1	0 1	0	0 0	0	0 0
E23	Hypofunction and other disorders of the pituitary gland	6	3 3	6	3 3	0	0 0	0	0 0
E27	Other disorders of adrenal gland	5	3 2	5	3 2	0	0 0	0	0 0
E43	Unspecified severe protein-energy malnutrition	4	2 2	4	2 2	0	0 0	0	0 0
E45	Retarded development following protein-energy malnutrition	1	0 1	1	0 1	0	0 0	0	0 0
E46	Unspecified protein-energy malnutrition	41	11 30	40	10 30	1	1 0	0	0 0
E53	Deficiency of other B group vitamins	1	1 0	1	1 0	0	0 0	0	0 0
E56	Other vitamin deficiencies	1	0 1	1	0 1	0	0 0	0	0 0
E61	Deficiency of other nutrient elements	1	1 0	1	1 0	0	0 0	0	0 0
E63	Other nutritional deficiencies	4	1 3	4	1 3	0	0 0	0	0 0
E64	Sequelae of malnutrition and other nutritional deficiencies	14	4 10	12	2 10	2	2 0	0	0 0
E66	Obesity	52	25 27	47	24 23	5	1 4	0	0 0
E71	Disorders of branched-chain amino-acid metabolism and fatty-acid metabolism	1	1 0	1	1 0	0	0 0	0	0 0
E74	Other disorders of carbohydrate metabolism	2	1 1	2	1 1	0	0 0	0	0 0
E75	Disorders of sphingolipid metabolism and other lipid storage disorders	4	3 1	4	3 1	0	0 0	0	0 0
E77	Disorders of glycoprotein metabolism	1	0 1	1	0 1	0	0 0	0	0 0
E78	Disorders of lipoprotein metabolism and other lipidemias	62	32 30	60	31 29	2	1 1	0	0 0
E83	Disorders of mineral metabolism	10	4 6	10	4 6	0	0 0	0	0 0
E84	Cystic fibrosis	15	6 9	15	6 9	0	0 0	0	0 0
E85	Amyloidosis	24	8 16	24	8 16	0	0 0	0	0 0
E86	Volume depletion	230	63 167	226	63 163	2	0 2	0	0 0
E87	Other disorders of fluid, electrolyte, and acid-base balance	84	41 43	70	31 39	11	7 4	3	3 0
E88	Other metabolic disorders	11	5 6	11	5 6	0	0 0	0	0 0
F01	Vascular dementia	18	6 12	18	6 12	0	0 0	0	0 0
F03	Unspecified dementia	1,010	268 742	978	262 716	26	6 20	6	0 6
F05	Delirium, not induced by alcohol and other psychoactive substances	1	0 1	1	0 1	0	0 0	0	0 0
F06	Other mental disorders due to brain damage and dysfunction and to physical disease	133	28 105	129	27 102	3	1 2	1	0 1
F09	Unspecified organic or symptomatic mental disorder	1	0 1	1	0 1	0	0 0	0	0 0
F10	Mental and behavioral disorders due to use of alcohol	163	127 36	150	118 32	13	9 4	0	0 0
F14	Mental and behavioral disorders due to use of cocaine	1	0 1	1	0 1	0	0 0	0	0 0
F17	Mental and behavioral disorders due to use of tobacco	9	3 6	9	3 6	0	0 0	0	0 0
F19	Mental and behavioral disorders due to multiple-drug use and use of other psychoactive substances	19	15 4	17	13 4	2	2 0	0	0 0

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ICD CODE	Cause of Death	TOTALS		WHITE		BLACK		OTHER	
		TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM
F20	Schizophrenia	10	3	7	10	3	7	0	0
F23	Acute and transient psychotic disorders	1	0	1	1	0	1	0	0
F25	Schizoaffective disorders	2	1	1	2	1	1	0	0
F29	Unspecified nonorganic psychosis	2	0	2	2	0	2	0	0
F31	Bipolar affective disorder	2	1	1	2	1	1	0	0
F32	Depressive episode	20	8	12	20	8	12	0	0
F34	Persistent mood [affective] disorders	1	0	1	1	0	1	0	0
F41	Other anxiety disorders	2	1	1	2	1	1	0	0
F50	Eating disorders	1	0	1	1	0	1	0	0
F54	Psychological and behavioral factors associated with disorders or diseases classified elsewhere	3	2	1	3	2	1	0	0
F79	Unspecified mental retardation	3	0	3	3	0	3	0	0
G00	Bacterial meningitis, not elsewhere classified	8	4	4	5	1	4	3	0
G03	Meningitis due to other and unspecified causes	5	4	1	4	3	1	0	0
G04	Encephalitis, myelitis, and encephalomyelitis	6	3	3	6	3	3	0	0
G06	Intracranial and intraspinal abscess and granuloma	2	1	1	2	1	1	0	0
G09	Sequelae of inflammatory diseases of central nervous system	4	3	1	4	3	1	0	0
G10	Huntington's disease	20	13	7	20	13	7	0	0
G11	Hereditary ataxia	2	1	1	2	1	1	0	0
G12	Spinal muscular atrophy and related syndromes	140	73	67	136	70	66	4	3
G20	Parkinson's disease	387	202	185	380	200	180	3	1
G23	Other degenerative diseases of basal ganglia	5	4	1	5	4	1	0	0
G24	Dystonia	1	1	0	1	1	0	0	0
G25	Other extrapyramidal and movement disorders	3	1	2	3	1	2	0	0
G30	Alzheimer's disease	1,137	297	840	1,110	290	820	27	7
G31	Other degenerative diseases of nervous system, not elsewhere classified	41	13	28	40	12	28	0	0
G35	Multiple sclerosis	94	31	63	90	30	60	4	1
G37	Other demyelinating diseases of central nervous system	2	1	1	2	1	1	0	0
G40	Epilepsy	11	4	7	8	2	6	3	2
G41	Status epilepticus	10	7	3	10	7	3	0	0
G45	Transient cerebral ischemic attacks and related syndromes	9	7	2	9	7	2	0	0
G47	Sleep disorders	8	5	3	7	5	2	1	0
G50	Disorders of trigeminal nerve	2	1	1	2	1	1	0	0
G58	Other mononeuropathies	1	0	1	1	0	1	0	0
G61	Inflammatory polyneuropathy	3	1	2	3	1	2	0	0
G62	Other polyneuropathies	6	2	4	6	2	4	0	0
G70	Myasthenia gravis and other myoneural disorders	18	11	7	18	11	7	0	0
G71	Primary disorders of muscles	14	10	4	13	10	3	1	0
G72	Other myopathies	6	3	3	6	3	3	0	0
G80	Infantile cerebral palsy	12	6	6	11	5	6	1	0
G81	Hemiplegia	4	1	3	4	1	3	0	0
G82	Paraplegia and tetraplegia	17	13	4	15	12	3	2	1
G83	Other paralytic syndromes	1	1	0	0	0	0	1	1

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ICD CODE	Cause of Death	TOTALS		WHITE		BLACK		OTHER	
		TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM
		4	1 3	3	1 2	1	0 1	0	0 0
G90	Disorders of autonomic nervous system	16	8 8	16	8 8	0	0 0	0	0 0
G91	Hydrocephalus	165	89 76	145	80 65	16	6 10	4	3 1
G93	Other disorders of brain	7	3 4	6	2 4	1	1 0	0	0 0
G95	Other diseases of spinal cord	3	1 2	3	1 2	0	0 0	0	0 0
G98	Other disorders of nervous system, not elsewhere classified	1	0 1	1	0 1	0	0 0	0	0 0
H40	Glaucoma	1	1 0	1	1 0	0	0 0	0	0 0
H70	Mastoiditis and related conditions	1	1 0	1	1 0	0	0 0	0	0 0
I01	Rheumatic fever with heart involvement	1	1 0	1	1 0	0	0 0	0	0 0
I05	Rheumatic mitral valve diseases	31	7 24	30	6 24	1	1 0	0	0 0
I07	Rheumatic tricuspid valve diseases	5	3 2	5	3 2	0	0 0	0	0 0
I08	Multiple valve diseases	1	1 0	1	1 0	0	0 0	0	0 0
I09	Other rheumatic heart diseases	29	5 24	29	5 24	0	0 0	0	0 0
I10	Essential (primary) hypertension	271	92 179	257	87 170	13	5 8	1	0 1
I11	Hypertensive heart disease	229	80 149	209	69 140	19	10 9	1	1 0
I12	Hypertensive renal disease	117	46 71	107	41 66	9	5 4	1	0 1
I13	Hypertensive heart and renal disease	48	18 30	44	16 28	2	1 1	1	1 1
I20	Angina pectoris	13	3 10	12	2 10	0	0 0	1	1 0
I21	Acute myocardial infarction	* 4,177	2,098 2,079	4,044	2,026 2,018	98	50 48	35	22 13
I24	Other acute ischemic heart diseases	27	9 18	25	8 17	2	1 1	0	0 0
I25	Chronic ischemic heart disease	6,265	3,101 3,164	6,059	2,988 3,071	171	91 80	35	22 13
I26	Pulmonary embolism	195	78 117	180	70 110	14	8 6	1	0 1
I27	Other pulmonary heart diseases	93	39 54	85	32 53	6	5 1	2	2 0
I28	Other diseases of pulmonary vessels	2	1 1	2	1 1	0	0 0	0	0 0
I30	Acute pericarditis	1	1 0	1	1 0	0	0 0	0	0 0
I31	Other diseases of pericardium	15	6 9	15	6 9	0	0 0	0	0 0
I33	Acute and subacute endocarditis	31	16 15	31	16 15	0	0 0	0	0 0
I34	Nonrheumatic mitral valve disorders	84	26 58	80	25 55	3	1 2	1	0 1
I35	Nonrheumatic aortic valve disorders	328	127 201	323	124 199	3	2 1	2	1 1
I38	Endocarditis, valve unspecified	86	34 52	80	31 49	5	3 2	1	0 1
I40	Acute myocarditis	15	6 9	15	6 9	0	0 0	0	0 0
I42	Cardiomyopathy	501	274 227	474	256 218	27	18 9	0	0 0
I44	Atrioventricular and left bundle-branch block	17	4 13	16	4 12	1	0 1	0	0 0
I45	Other conduction disorders	16	8 8	14	7 7	2	1 1	0	0 0
I46	Cardiac arrest	667	307 360	627	295 332	34	10 24	6	2 4
I47	Paroxysmal tachycardia	18	11 7	18	11 7	0	0 0	0	0 0
I48	Atrial fibrillation and flutter	286	81 205	283	79 204	2	1 1	1	1 0
I49	Other cardiac arrhythmias	378	172 206	352	158 194	25	14 11	1	0 1
I50	Heart failure	1,778	627 1,151	1,717	610 1,107	53	12 41	8	5 3
I51	Complications and ill-defined descriptions of heart disease	202	112 90	192	109 83	7	3 4	3	0 3
I60	Subarachnoid hemorrhage	125	35 90	107	30 77	12	3 9	6	2 4
I61	Intracerebral hemorrhage	410	178 232	389	165 224	14	9 5	7	4 3
I62	Other nontraumatic intracranial hemorrhage	129	60 69	124	56 68	2	2 0	3	2 1
I63	Cerebral infarction	292	113 179	282	108 174	7	3 4	3	2 1

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ICD CODE	Cause of Death	TOTALS		WHITE		BLACK		OTHER	
		TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM
I64	Stroke, not specified as hemorrhage or infarction	1,821	584 1,237	1,762	557 1,205	47	22 25	12	5 7
I67	Other cerebrovascular diseases	135	55 80	132	53 79	3	2 1	0	0 0
I69	Sequelae of cerebrovascular disease	661	258 403	637	243 394	20	12 8	4	3 1
I70	Atherosclerosis	321	117 204	319	116 203	1	1 0	1	0 1
I71	Aortic aneurysm and dissection	386	210 176	378	204 174	4	3 1	4	3 1
I72	Other aneurysm	11	9 2	11	9 2	0	0 0	0	0 0
I73	Other peripheral vascular diseases	203	81 122	193	78 115	9	3 6	1	0 1
I74	Arterial embolism and thrombosis	25	9 16	24	8 16	1	1 0	0	0 0
I77	Other disorders of arteries and arterioles	25	13 12	24	12 12	1	1 0	0	0 0
I78	Diseases of capillaries	1	0 1	1	0 1	0	0 0	0	0 0
I80	Phlebitis and thrombophlebitis	29	8 21	27	7 20	2	1 1	0	0 0
I81	Portal vein thrombosis	4	2 2	4	2 2	0	0 0	0	0 0
I82	Other venous embolism and thrombosis	3	0 3	2	0 2	1	0 1	0	0 0
I83	Varicose veins of lower extremities	3	3 0	3	3 0	0	0 0	0	0 0
I85	Esophageal varices	7	6 1	7	6 1	0	0 0	0	0 0
I86	Varicose veins of other sites	2	1 1	2	1 1	0	0 0	0	0 0
I87	Other disorders of veins	1	0 1	1	0 1	0	0 0	0	0 0
I89	Other noninfective disorders of lymphatic vessels and lymph nodes	1	0 1	1	0 1	0	0 0	0	0 0
I95	Hypotension	26	13 13	25	13 12	1	0 1	0	0 0
I99	Other and unspecified disorders of circulatory system	7	5 2	7	5 2	0	0 0	0	0 0
J04	Acute laryngitis and tracheitis	1	0 1	0	0 0	1	0 1	0	0 0
J06	Acute upper respiratory infections of multiple and unspecified sites	5	2 3	5	2 3	0	0 0	0	0 0
J10	Influenza due to identified influenza virus	3	1 2	2	1 1	0	0 0	1	0 1
J11	Influenza, virus not identified	15	8 7	15	8 7	0	0 0	0	0 0
J12	Viral pneumonia, not elsewhere classified	4	2 2	4	2 2	0	0 0	0	0 0
J13	Pneumonia due to Streptococcus pneumoniae	6	1 5	5	1 4	1	0 1	0	0 0
J14	Pneumonia due to Hemophilus influenza	1	0 1	1	0 1	0	0 0	0	0 0
J15	Bacterial pneumonia, not elsewhere classified	69	44 25	65	42 23	4	2 2	0	0 0
J18	Pneumonia, organism unspecified	2,078	853 1,225	2,026	831 1,195	38	13 25	14	9 5
J20	Acute bronchitis	9	5 4	9	5 4	0	0 0	0	0 0
J21	Acute bronchiolitis	2	2 0	1	1 0	0	0 0	1	1 0
J22	Unspecified acute lower respiratory infection	6	1 5	6	1 5	0	0 0	0	0 0
J32	Chronic sinusitis	1	0 1	1	0 1	0	0 0	0	0 0
J37	Chronic laryngitis and laryngotracheitis	1	1 0	1	1 0	0	0 0	0	0 0
J38	Diseases of vocal cords and larynx, not elsewhere classified	6	1 5	6	1 5	0	0 0	0	0 0
J39	Other diseases of upper respiratory tract	7	4 3	7	4 3	0	0 0	0	0 0
J40	Bronchitis, not specified as acute or chronic	19	9 10	19	9 10	0	0 0	0	0 0
J42	Unspecified chronic bronchitis	10	6 4	10	6 4	0	0 0	0	0 0
J43	Emphysema	377	186 191	372	181 191	5	5 5	0	0 0
J44	Other chronic obstructive pulmonary disease	2,320	1,040 1,280	2,276	1,010 1,266	40	26 14	4	4 0
J45	Asthma	96	38 58	86	31 55	8	6 2	2	1 1
J46	Status asthmaticus	6	2 4	6	2 4	0	0 0	0	0 0
J47	Bronchiectasis	29	11 18	29	11 18	0	0 0	0	0 0



TABLE C-15 1999

ICD CODE	Cause of Death	TOTALS		WHITE		BLACK		OTHER	
		TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM
J61	Pneumococcosis due to asbestos and other mineral fibers	14	13	1	13	12	1	0	0
J68	Respiratory conditions due to inhalation of chemicals, gases, fumes, and vapors	1	1	0	1	1	0	0	0
J69	Pneumonitis due to solids and liquids	592	286	306	575	277	298	3	2
J80	Adult respiratory distress syndrome	61	34	27	58	34	24	7	7
J81	Pulmonary edema	29	10	19	28	10	18	0	0
J82	Pulmonary eosinophilia, not elsewhere classified	4	1	3	4	1	3	0	0
J84	Other interstitial pulmonary diseases	265	135	130	256	130	126	4	4
J85	Abscess of lung and mediastinum	6	2	4	5	2	3	0	0
J86	Pyothorax	11	8	3	10	7	3	0	0
J90	Pleural effusion, not elsewhere classified	25	14	11	25	14	11	0	0
J92	Pleural plaque	1	1	0	1	1	0	0	0
J93	Pneumothorax	14	5	9	13	5	8	1	0
J94	Other pleural conditions	4	2	2	4	2	2	0	0
J96	Respiratory failure, not elsewhere classified	317	103	214	302	101	201	13	2
J98	Other respiratory disorders	140	66	74	137	66	71	3	0
K04	Diseases of pulp and periapical tissues	1	0	1	1	0	1	0	0
K20	Esophagitis	5	2	3	5	2	3	0	0
K21	Gastroesophageal reflux disease	12	8	4	11	7	4	0	0
K22	Other diseases of esophagus	26	11	15	24	10	14	1	0
K25	Gastric ulcer	20	14	6	20	14	6	0	0
K26	Duodenal ulcer	25	14	11	25	14	11	0	0
K27	Peptic ulcer, site unspecified	30	16	14	30	16	14	0	0
K28	Gastrojejunal ulcer	1	1	0	1	1	0	0	0
K29	Gastritis and duodenitis	13	7	6	13	7	6	0	0
K31	Other diseases of stomach and duodenum	11	2	9	11	2	9	0	0
K35	Acute appendicitis	5	3	2	5	3	2	0	0
K37	Unspecified appendicitis	1	0	1	1	0	1	0	0
K40	Inguinal hernia	2	1	1	2	1	1	0	0
K41	Femoral hernia	2	0	2	2	0	2	0	0
K42	Umbilical hernia	4	0	4	4	0	4	0	0
K43	Ventral hernia	3	0	3	3	0	3	0	0
K44	Diaphragmatic hernia	8	2	6	8	2	6	0	0
K46	Unspecified abdominal hernia	11	4	7	11	4	7	0	0
K50	Crohn's disease [regional enteritis]	13	5	8	13	5	8	0	0
K51	Ulcerative colitis	7	2	5	7	2	5	0	0
K52	Other noninfective gastroenteritis and colitis	37	9	28	36	8	28	0	0
K55	Vascular disorders of intestine	215	77	138	202	72	130	11	3
K56	Paralytic ileus and intestinal obstruction without hernia	167	58	109	163	56	107	4	2
K57	Diverticular disease of intestine	83	21	62	79	18	61	3	2
K59	Other functional intestinal disorders	13	5	8	13	5	8	0	0
K61	Abscess of anal and rectal regions	3	2	1	3	2	1	0	0
K62	Other diseases of anus and rectum	11	0	11	11	0	11	0	0
K63	Other diseases of intestine	66	21	45	65	20	45	0	0

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ICD CODE	Cause of Death	TOTALS		WHITE		BLACK		OTHER	
		TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM
K65	Peritonitis	52	31 21	50 29	21	0 0	0 0	2 2	0 0
K66	Other disorders of peritoneum	4	2 2	4	2	0 0	0 0	0 0	0 0
K70	Alcoholic liver disease	160	114 46	150 111 39	2	8 3	5 5	2 0	0 2
K72	Hepatic failure, not elsewhere classified	171	108 63	155 100 55	8	10 5	5 5	6 3	3 3
K73	Chronic hepatitis, not elsewhere classified	11	3 8	11 3	8	0 0	0 0	0 0	0 0
K74	Fibrosis and cirrhosis of liver	415	258 157	398 247 151	3	12 9	3 3	5 2	3 3
K75	Other inflammatory liver diseases	9	6 3	8 6	2	0 0	0 0	1 0	1 1
K76	Other diseases of liver	65	45 20	56 37 19	7	7 7	0 0	2 1	1 1
K80	Cholelithiasis	24	7 17	23 6	17	0 0	0 0	1 1	0 0
K81	Cholecystitis	35	15 20	33 15	18	2 0	2 2	0 0	0 0
K82	Other diseases of gallbladder	8	4 4	8 4	4	0 0	0 0	0 0	0 0
K83	Other diseases of biliary tract	38	21 17	37 20 17	1	1 1	0 0	0 0	0 0
K85	Acute pancreatitis	62	29 33	56 25 31	5	4 1	0 0	1 0	1 1
K86	Other diseases of pancreas	5	3 2	4 2	2	1 1	0 0	0 0	0 0
K90	Intestinal malabsorption	8	2 6	8 2	6	0 0	0 0	0 0	0 0
K92	Other diseases of the digestive system	256	109 147	247 103 144	8	5 3	3 3	1 1	0 0
L02	Cutaneous abscess, furuncle, and carbuncle	3	2 1	1 0	1	2 2	0 0	0 0	0 0
L03	Cellulitis	18	6 12	18 6	12	0 0	0 0	0 0	0 0
L08	Other local infections of skin and subcutaneous tissue	3	1 2	3 1	2	0 0	0 0	0 0	0 0
L10	Penphigus	3	1 2	3 1	2	0 0	0 0	0 0	0 0
L12	Penphigoid	1	0 1	1 0	1	0 0	0 0	0 0	0 0
L51	Erythema multiforme	4	2 2	4 2	2	0 0	0 0	0 0	0 0
L89	Decubitus ulcer	27	10 17	27 10 17	0	0 0	0 0	0 0	0 0
L92	Granulomatous disorders of skin and subcutaneous tissue	1	0 1	1 0	1	0 0	0 0	0 0	0 0
L93	Lupus erythematosus	8	1 7	7 1	6	1 0	1 1	0 0	0 0
L97	Ulcer of lower limb, not elsewhere classified	6	2 4	6 2	4	0 0	0 0	0 0	0 0
L98	Other disorders of skin and subcutaneous tissue, not elsewhere classified	1	1 0	1 1	0	0 0	0 0	0 0	0 0
M00	Pyogenic arthritis	4	1 3	4 1	3	0 0	0 0	0 0	0 0
M05	Seropositive rheumatoid arthritis	13	3 10	13 3 10	0	0 0	0 0	0 0	0 0
M06	Other rheumatoid arthritis	52	8 44	50 8 42	2	0 2	2 2	0 0	0 0
M13	Other arthritis	5	1 4	5 1	4	0 0	0 0	0 0	0 0
M16	Coxarthrosis [arthrosis of hip]	1	1 0	1 1	0	0 0	0 0	0 0	0 0
M17	Gonarthrosis [arthrosis of knee]	2	1 1	2 1	1	0 0	0 0	0 0	0 0
M19	Other arthrosis	11	4 7	11 4	7	0 0	0 0	0 0	0 0
M25	Other joint disorders, not elsewhere classified	1	1 0	1 1	0	0 0	0 0	0 0	0 0
M30	Polyarteritis nodosa and related conditions	1	1 0	1 1	0	0 0	0 0	0 0	0 0
M31	Other necrotizing vasculopathies	15	7 8	14 7 7	6	3 1	2 2	0 0	1 1
M32	Systemic lupus erythematosus	13	5 8	10 4 6	3	0 0	0 0	0 0	0 0
M33	Dermatopolymyositis	5	2 3	5 2	3	0 0	0 0	0 0	0 0
M34	Systemic sclerosis	37	9 28	34 9 25	3	0 3	0 3	0 0	0 0
M35	Other systemic involvement of connective tissue	6	2 4	6 2	4	0 0	0 0	0 0	0 0
M40	Kyphosis and lordosis	1	0 1	1 0	1	0 0	0 0	0 0	0 0
M41	Scoliosis	11	4 7	11 4	7	0 0	0 0	0 0	0 0

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ICD CODE	Cause of Death	TOTALS		WHITE		BLACK		OTHER	
		TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM
M46	Other inflammatory spondylopathies	3	1	2	1	1	0	0	0
M47	Spondylosis	1	1	0	1	0	0	0	0
M48	Other spondylopathies	6	4	2	4	0	0	0	0
M60	Myositis	1	1	0	1	0	0	0	0
M62	Other disorders of muscle	8	6	2	6	2	0	0	0
M72	Fibroblastic disorders	4	0	4	2	2	0	0	0
M79	Other soft tissue disorders, not elsewhere classified	1	1	0	1	0	0	0	0
M80	Osteoporosis with pathological fracture	17	3	14	17	3	14	0	0
M81	Osteoporosis without pathological fracture	26	1	25	25	1	0	0	0
M86	Osteomyelitis	33	19	14	32	18	14	0	0
M87	Osteonecrosis	1	1	0	1	0	0	1	0
M88	Paget's disease of bone [osteitis deformans]	2	1	1	2	1	0	0	0
M89	Other disorders of bone	1	1	0	1	0	0	0	0
M94	Other disorders of cartilage	1	0	1	1	0	0	0	0
M95	Other acquired deformities of musculoskeletal system and connective tissue	1	0	1	1	0	0	0	0
N01	Rapidly progressive nephritic syndrome	2	2	0	2	0	0	0	0
N03	Chronic nephritic syndrome	3	1	2	3	1	2	0	0
N04	Nephrotic syndrome	3	1	2	3	1	2	0	0
N05	Unspecified nephritic syndrome	1	0	1	1	0	0	0	0
N11	Chronic tubulo-interstitial nephritis	1	0	1	1	0	0	0	0
N12	Tubulo-interstitial nephritis, not specified as acute or chronic	8	4	4	8	4	4	0	0
N13	Obstructive and reflux uropathy	4	3	1	4	3	1	0	0
N17	Acute renal failure	155	65	90	151	62	89	3	3
N18	Chronic renal failure	385	199	186	342	180	162	39	16
N19	Unspecified renal failure	554	264	290	516	248	268	32	14
N20	Calculus of kidney and ureter	5	0	5	5	0	5	0	0
N28	Other disorders of kidney and ureter, not elsewhere classified	16	8	8	12	6	6	4	2
N30	Cystitis	2	1	1	2	1	1	0	0
N31	Neuromuscular dysfunction of bladder, not elsewhere classified	1	1	0	1	0	0	0	0
N32	Other disorders of bladder	5	0	5	5	0	5	0	0
N36	Other disorders of urethra	3	1	2	3	1	2	0	0
N39	Other disorders of urinary system	360	98	262	347	92	255	9	5
N40	Hyperplasia of prostate	7	7	0	7	7	0	0	0
N42	Other disorders of prostate	1	1	0	1	1	0	0	0
N45	Orchitis and epididymitis	1	1	0	1	1	0	0	0
N73	Other female pelvic inflammatory diseases	1	0	1	1	0	1	0	0
N82	Fistulae involving female genital tract	1	0	1	1	0	1	0	0
N83	Noninflammatory disorders of ovary, fallopian tube, and broad ligament	1	0	1	1	0	1	0	0
N88	Other noninflammatory disorders of cervix uteri	5	1	4	4	1	3	0	0
O46	Antepartum hemorrhage, not elsewhere classified	1	0	1	1	0	1	0	0
O99	Other maternal diseases classifiable elsewhere but complicating pregnancy, childbirth, and the puerperium	1	0	1	1	0	1	0	0
P00	Newborn affected by maternal conditions that may be unrelated to present pregnancy	1	1	0	1	1	0	0	0

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ICD CODE	Cause of Death	TOTALS		WHITE		BLACK		OTHER	
		TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM
P01	Newborn affected by maternal complications of pregnancy	21	13	8	8	5	5	0	0
P02	Newborn affected by complications of placenta, cord, and membranes	18	8	10	8	4	2	1	1
P03	Newborn affected by other complications of labor and delivery	3	3	0	0	2	2	0	0
P05	Slow fetal growth and fetal malnutrition	2	2	0	0	0	0	0	0
P07	Disorders related to short gestation and low birthweight, not elsewhere classified	94	46	48	33	32	17	2	2
P20	Intrauterine hypoxia	2	1	1	1	0	0	0	0
P21	Birth asphyxia	11	5	6	4	2	0	0	0
P22	Respiratory distress of newborn	20	7	13	10	2	0	0	0
P23	Congenital pneumonia	1	0	1	0	0	0	0	0
P24	Neonatal aspiration syndromes	2	2	0	0	0	0	0	0
P25	Interstitial emphysema and related conditions originating in the perinatal period	5	3	2	2	0	0	0	0
P26	Pulmonary hemorrhage originating in the perinatal period	5	5	0	0	2	2	0	0
P27	Chronic respiratory disease originating in the perinatal period	4	3	1	1	0	0	0	0
P28	Other respiratory conditions originating in the perinatal period	2	1	1	0	1	1	0	0
P29	Cardiovascular disorders originating in the perinatal period	26	14	12	10	2	0	0	0
P35	Congenital viral diseases	1	0	1	0	0	0	0	0
P36	Bacterial sepsis of newborn	16	7	9	7	3	1	0	0
P50	Fetal blood loss	1	0	1	0	0	0	0	0
P52	Intracranial nontraumatic hemorrhage of fetus and newborn	3	1	2	1	1	0	0	0
P60	Disseminated intravascular coagulation of newborn	1	1	0	0	0	0	0	0
P61	Other perinatal hematological disorders	1	0	1	0	0	0	0	0
P70	Transitory disorders of carbohydrate metabolism specific to newborn	2	1	1	1	0	0	0	0
P77	Neurotizing enterocolitis of newborn	5	4	1	0	2	1	0	0
P83	Other conditions of integument specific to newborn	4	1	3	3	1	0	0	0
P90	Convulsions of newborn	2	1	1	1	0	0	0	0
P96	Other conditions originating in the perinatal period	12	7	5	5	1	1	0	0
Q00	Anencephaly and similar malformations	7	2	5	3	2	0	0	0
Q01	Encephalocele	1	0	1	0	0	0	0	0
Q02	Microcephaly	4	3	1	1	0	0	0	0
Q03	Congenital hydrocephalus	2	2	0	0	1	1	0	0
Q04	Other congenital malformations of brain	4	2	2	2	1	1	0	0
Q05	Spina bifida	2	0	2	2	0	0	0	0
Q20	Congenital malformations of cardiac chambers and connections	3	3	0	0	0	0	0	0
Q21	Congenital malformations of cardiac septa	17	6	11	10	1	0	0	0
Q23	Congenital malformations of aortic and mitral valves	5	3	2	1	1	0	0	0
Q24	Congenital malformations of heart	10	2	8	8	0	0	0	0
Q25	Congenital malformations of great arteries	2	0	2	2	0	0	0	0
Q27	Other congenital malformations of peripheral vascular system	8	3	5	5	0	0	0	0
Q28	Other congenital malformations of circulatory system	7	5	2	4	0	0	0	0
Q32	Congenital malformations of trachea and bronchus	2	2	0	2	0	0	0	0
Q33	Congenital malformations of lung	15	10	5	10	0	0	0	0
Q35	Cleft palate	1	1	0	1	0	0	0	0
Q39	Congenital malformations of esophagus	1	0	1	0	0	0	0	0

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ICD CODE	Cause of Death	TOTALS		WHITE		BLACK		OTHER	
		TOT	MALE	TOT	MALE	TOT	MALE	TOT	MALE
		FEM	FEM	FEM	FEM	FEM	FEM	FEM	FEM
Q41	Congenital absence, atresia, and stenosis of small intestine	1	0	1	0	1	0	0	0
Q43	Other congenital malformations of intestine	2	1	2	1	0	0	0	0
Q44	Congenital malformations of gallbladder, bile ducts, and liver	2	0	2	0	0	0	0	0
Q60	Renal agenesis and other reduction defects of kidney	2	0	2	0	0	0	0	0
Q61	Cystic kidney disease	9	1	9	1	0	0	0	0
Q62	Congenital obstructive defects of renal pelvis and congenital malformations of ureter	1	0	1	0	1	0	0	0
Q78	Other osteochondrodysplasias	1	0	1	0	1	0	0	0
Q79	Congenital malformations of musculoskeletal system, not elsewhere classified	4	2	4	2	2	0	0	0
Q81	Epidemiolysis bullosa	2	1	0	0	1	0	1	0
Q82	Other congenital malformations of skin	1	0	1	0	0	0	0	0
Q85	Phakomatoses, not elsewhere classified	2	1	2	1	0	0	0	0
Q87	Other specified congenital malformation syndromes affecting multiple systems	2	0	2	0	0	0	0	0
Q89	Other congenital malformations, not elsewhere classified	11	5	11	5	6	0	0	0
Q90	Down's syndrome	16	7	15	6	9	1	0	0
Q91	Edwards' syndrome and Patau's syndrome	10	5	9	5	4	1	0	0
Q99	Other chromosome abnormalities, not elsewhere classified	2	1	2	1	1	0	0	0
R00	Abnormalities of heart beat	6	1	6	1	5	0	0	0
R04	Hemorrhage from respiratory passages	4	2	3	1	2	1	0	0
R06	Abnormalities of breathing	10	7	9	6	3	1	0	0
R07	Pain in throat and chest	2	0	2	0	2	0	0	0
R09	Other symptoms and signs involving the circulatory and respiratory systems	117	54	111	53	58	6	0	0
R10	Abdominal and pelvic pain	9	3	9	3	6	0	0	0
R13	Dysphagia	1	0	1	0	0	0	0	0
R19	Other symptoms and signs involving the digestive system and abdomen	11	2	11	2	9	0	0	0
R40	Somnolence, stupor, and coma	1	0	1	0	1	0	0	0
R50	Fever of unknown origin	2	1	2	1	1	0	0	0
R53	Malaise and fatigue	3	0	3	0	2	0	0	0
R54	Senility	14	3	14	3	11	0	0	0
R56	Convulsions, not elsewhere classified	25	11	23	11	12	2	0	0
R57	Shock, not elsewhere classified	27	15	27	15	12	0	0	0
R58	Hemorrhage, not elsewhere classified	13	6	13	6	7	0	0	0
R62	Lack of expected normal physiological development	32	2	31	2	29	0	0	0
R64	Cachexia	3	1	3	1	2	0	0	0
R68	Other general symptoms and signs	1	0	1	0	1	0	0	0
R79	Other abnormal findings of blood chemistry	1	1	1	0	1	0	0	0
R91	Abnormal findings on diagnostic imaging of lung	3	3	3	3	0	0	0	0
R95	Sudden infant death syndrome	24	13	20	11	9	4	0	0
R96	Other sudden death, cause unknown	6	3	5	2	3	1	0	0
R99	Other ill-defined and unspecified causes of mortality	117	80	105	72	33	9	5	3
V02	Pedestrian injured in collision with two- or three-wheeled motor vehicle	1	1	1	1	0	0	0	0
V03	Pedestrian injured in collision with car, pickup truck, or van	33	24	29	20	9	3	0	0
V04	Pedestrian injured in collision with heavy transport vehicle or bus	7	4	7	4	3	0	0	0
V05	Pedestrian injured in collision with railway train or railway vehicle	12	11	11	10	1	1	0	0

TABLE C-15 1999

ICD CODE	Cause of Death	TOTALS				WHITE		BLACK		OTHER		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE
V09	Pedestrian injured in other and unspecified transport accidents	48	38	10	43	34	9	5	4	1	0	0
V13	Pedal cyclist injured in collision with car, pickup truck, or van	1	1	0	0	0	0	1	1	0	0	0
V14	Pedal cyclist injured in collision with heavy transport vehicle or bus	1	0	1	1	0	1	0	0	0	0	0
V17	Pedal cyclist injured in collision with fixed or stationary object	1	1	0	1	1	0	0	0	0	0	0
V19	Pedal cyclist injured in other and unspecified transport accidents	4	4	0	4	4	0	0	0	0	0	0
V23	Motorcycle rider injured in collision with car, pickup truck, or van	8	7	1	8	7	1	0	0	0	0	0
V24	Motorcycle rider injured in collision with heavy transport vehicle or bus	2	2	0	2	2	0	0	0	0	0	0
V27	Motorcycle rider injured in collision with fixed or stationary object	7	7	0	7	7	0	0	0	0	0	0
V28	Motorcycle rider injured in noncollision transport accident	1	1	0	0	0	0	0	0	0	0	0
V29	Motorcycle rider injured in other and unspecified transport accidents	18	15	3	16	13	3	2	2	0	0	0
V43	Car occupant injured in collision with car, pickup truck, or van	15	7	8	14	6	8	1	1	0	0	0
V44	Car occupant injured in collision with heavy transport vehicle or bus	3	3	0	3	3	0	0	0	0	0	0
V47	Car occupant injured in collision with fixed or stationary object	38	26	12	35	23	12	3	3	0	0	0
V48	Car occupant injured in noncollision transport accident	5	4	1	4	3	1	1	1	0	0	0
V49	Car occupant injured in other and unspecified transport accidents	31	20	11	27	17	10	3	2	1	1	0
V53	Occupant of pickup truck or van injured in collision with car, pickup truck, or van	3	1	2	3	1	2	0	0	0	0	0
V57	Occupant of pickup truck or van injured in collision with fixed or stationary object	3	3	0	3	3	0	0	0	0	0	0
V59	Occupant of pickup truck or van injured in other and unspecified transport accidents	1	0	1	1	0	1	0	0	0	0	0
V64	Occupant of heavy transport vehicle injured in collision with heavy transport vehicle or bus	1	1	0	1	1	0	0	0	0	0	0
V69	Occupant of heavy transport vehicle injured in other and unspecified transport accidents	1	1	0	1	1	0	0	0	0	0	0
V74	Bus occupant injured in collision with heavy transport vehicle or bus	1	0	1	1	1	0	0	0	0	0	0
V80	Animal-rider or occupant of animal-drawn vehicle injured in transport accident	1	1	0	1	1	0	0	0	0	0	0
V83	Occupant of special vehicle mainly used on industrial premises injured in transport accident	1	1	0	1	1	0	0	0	0	0	0
V86	Occupant of special ATV or other motor vehicle designed for off-road use, injured in transport accident	2	2	0	2	2	0	0	0	0	0	0
V87	Traffic accident of specified type but victim's mode of transport unknown	39	24	15	36	22	14	3	2	1	0	0
V89	Motor- or nonmotor-vehicle accident, type of vehicle unspecified	178	125	53	166	116	50	6	6	0	6	3
V90	Accident to watercraft causing drowning and submersion	1	1	0	1	1	0	0	0	0	0	0
V93	Accident onboard watercraft without accident to watercraft, not causing drowning and submersion	1	1	0	1	1	0	0	0	0	0	0
V94	Other and unspecified water transport accidents	2	2	0	-2	2	0	0	0	0	0	0
V95	Accident to powered aircraft causing injury to occupant	6	6	0	6	6	0	0	0	0	0	0
W00	Fall on same level involving ice and snow	1	0	1	1	0	1	0	0	0	0	0
W01	Fall on same level from slipping, tripping, and stumbling	7	4	3	6	3	3	0	0	0	1	0
W02	Fall involving ice skates, skis, roller skates, or skateboards	1	1	0	1	1	0	0	0	0	0	0
W03	Other fall on same level due to collision with, or pushing by, another person	1	1	0	1	1	0	0	0	0	0	0
W04	Fall while being carried or supported by other persons	1	0	1	1	0	1	0	0	0	0	0
W05	Fall involving wheelchair	1	0	1	1	0	1	0	0	0	0	0
W06	Fall involving bed	2	2	0	2	2	0	0	0	0	0	0
W07	Fall involving chair	5	3	2	5	3	2	0	0	0	0	0
W10	Fall on and from stairs and steps	49	19	30	49	19	30	0	0	0	0	0
W11	Fall on and from ladder	6	6	0	6	6	0	0	0	0	0	0
W12	Fall on and from scaffolding	2	2	0	2	2	0	0	0	0	0	0

TABLE C-15 1999

TABLE C-13 1999										
ICD CODE	Cause of Death	TOTALS		WHITE		BLACK		OTHER		
		TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM	
W13	Fall from, out of, or through building or structure	19	11	8	18	11	7	1	0	1
W16	Diving or jumping into water causing injury other than drowning or submersion	1	0	1	1	0	1	0	0	0
W17	Other fall from one level to another	13	11	2	10	8	2	2	2	0
W18	Other fall on same level	5	4	1	5	4	1	0	0	1
W19	Unspecified fall	92	60	32	88	56	32	4	4	0
W20	Struck by thrown, projected, or falling object	7	5	2	6	5	1	1	0	1
W22	Striking against or struck by other objects	2	2	0	2	2	0	0	0	0
W24	Contact with lifting and transmission devices, not elsewhere classified	2	2	0	2	2	0	0	0	0
W31	Contact with other and unspecified machinery	3	3	0	3	3	0	0	0	0
W40	Explosion of other materials	3	3	0	2	2	0	1	1	0
W65	Drowning and submersion while in bathtub	2	0	2	1	0	1	0	0	0
W66	Drowning and submersion following fall into bathtub	1	0	1	1	0	1	0	0	1
W67	Drowning and submersion while in swimming pool	3	3	0	2	2	0	0	0	0
W69	Drowning and submersion while in natural water	6	6	0	6	6	0	0	0	1
W70	Drowning and submersion following fall into natural water	1	1	0	1	1	0	0	0	0
W73	Other specified drowning and submersion	1	0	1	1	0	1	0	0	0
W74	Unspecified drowning and submersion	28	25	3	26	23	3	2	2	0
W75	Accidental suffocation and strangulation in bed	1	1	0	0	0	0	1	1	0
W76	Other accidental hanging and strangulation	5	5	0	5	5	0	0	0	0
W77	Threat to breathing due to cave-in, falling earth, and other substances	1	1	0	1	1	0	0	0	0
W78	Inhalation of gastric contents	8	6	2	7	6	1	1	0	0
W79	Inhalation and ingestion of food causing obstruction of respiratory tract	15	8	7	15	8	7	0	0	1
W80	Inhalation and ingestion of other objects causing obstruction of respiratory tract	72	32	40	68	30	38	3	1	2
W83	Other specified threats to breathing	4	2	2	4	2	2	0	0	0
W84	Unspecified threat to breathing	16	10	6	16	10	6	0	0	0
W85	Exposure to electric transmission lines	2	2	0	2	2	0	0	0	0
W87	Exposure to unspecified electric current	3	3	0	3	3	0	0	0	0
W93	Exposure to excessive cold of man-made origin	1	0	1	1	0	1	0	0	0
X00	Exposure to uncontrolled fire in building or structure	35	21	14	31	19	12	1	1	0
X01	Exposure to uncontrolled fire, not in building or structure	2	2	0	2	2	0	0	0	0
X02	Exposure to controlled fire in building or structure	3	1	2	2	1	1	1	0	1
X03	Exposure to controlled fire, not in building or structure	1	1	0	1	1	0	0	0	0
X04	Exposure to ignition of highly flammable material	1	1	0	1	1	0	0	0	0
X06	Exposure to ignition or melting of other clothing and apparel	3	2	1	2	1	1	1	1	0
X09	Exposure to unspecified smoke, fire, and flames	3	3	0	3	3	0	0	0	0
X30	Exposure to excessive natural heat	3	1	2	3	1	2	0	0	0
X31	Exposure to excessive natural cold	19	10	9	16	7	9	3	3	0
X40	Accidental poisoning by and exposure to nonopioid analgesics, antipyretics, and antirheumatics	2	2	0	2	2	0	0	0	0
X41	Accidental poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism, and psychotropic drugs,not elsewhere classified	5	2	3	5	2	3	0	0	0
X42	Accidental poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified	23	14	9	23	14	9	0	0	0

TABLE C-15 1999

TABLE C-13 1999										
ICD CODE	Cause of Death	TOTALS		WHITE		BLACK		OTHER		
		TOT 10	MALE 9	FEM 1	TOT 10	MALE 9	FEM 1	TOT 10	MALE 9	FEM 1
X44	Accidental poisoning by and exposure to other and unspecified drugs, medicaments, and biological substances	1	1	0	1	1	0	0	0	0
X45	Accidental poisoning by and exposure to alcohol	8	7	1	8	7	1	0	0	0
X47	Accidental poisoning by and exposure to other gases and vapors	1	0	1	1	0	1	0	0	0
X48	Accidental poisoning by and exposure to pesticides	2	1	1	2	1	1	0	0	0
X49	Accidental poisoning by and exposure to other and unspecified chemicals and noxious substances	1	0	1	1	0	1	0	0	0
X53	Lack of food	1	1	0	1	1	0	0	0	0
X57	Unspecified privation	1	1	0	1	1	0	0	0	0
X58	Exposure to other specified factors	1	1	0	0	0	0	1	1	0
X59	Exposure to unspecified factor	266	107	159	261	105	156	4	1	3
X60	Intentional self-poisoning (suicide) by and exposure to nonopioid analgesics, antipyretics, and antirheumatics	6	1	5	6	1	5	0	0	0
X61	Intentional self-poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism, and psychotropics, not elsewhere classified	26	13	13	24	12	12	1	0	1
X62	Intentional self-poisoning (suicide) by and exposure to narcotics and psychodysleptics hallucinogens not elsewhere classified	12	5	7	12	5	7	0	0	0
X63	Intentional self-poisoning (suicide) by and exposure to other drugs acting on the autonomic nervous system	4	2	2	2	1	1	1	1	0
X64	Intentional self-poisoning by and exposure to other and unspecified drugs, medicaments, and biological substance	20	9	11	20	9	11	0	0	0
X65	Intentional self-poisoning (suicide) by and exposure to alcohol	2	1	1	2	1	1	0	0	0
X66	Intentional self-poisoning by and exposure to organic solvents and halogenated hydrocarbons and their vapors	2	2	0	2	2	0	0	0	0
X67	Intentional self-poisoning (suicide) by and exposure to other gases and vapors	24	21	3	23	21	2	0	0	0
X69	Intentional self-poisoning (suicide) by and exposure to other and unspecified chemicals and noxious substances	3	2	1	3	2	1	0	0	0
X70	Intentional self harm (suicide) by hanging, strangulation, and suffocation	156	124	32	147	117	30	4	4	0
X71	Intentional self harm (suicide) by drowning and submersion	8	7	1	8	7	1	0	0	0
X72	Intentional self harm (suicide) by handgun discharge	15	14	1	13	12	1	1	1	0
X73	Intentional self harm (suicide) by rifle, shotgun, and larger firearm discharge	29	29	0	29	29	0	0	0	0
X74	Intentional self harm (suicide) by other and unspecified firearm discharge	74	62	12	72	60	12	2	2	0
X76	Intentional self harm (suicide) by smoke, fire, and flames	1	1	0	1	1	0	0	0	0
X78	Intentional self harm (suicide) by sharp object	16	11	5	15	10	5	0	0	0
X80	Intentional self harm (suicide) by jumping from a high place	17	14	3	15	12	3	2	2	0
X81	Intentional self harm (suicide) by jumping or lying before moving object	2	1	1	2	1	1	0	0	0
X82	Intentional self harm (suicide) by crashing of motor vehicle	2	2	0	2	2	0	0	0	0
X83	Intentional self harm (suicide) by other specified means	10	7	3	9	6	3	1	1	0
X84	Intentional self harm (suicide) by unspecified means	1	1	0	1	1	0	0	0	0
X85	Assault (homicide) by drugs, medicaments, and biological substances	1	0	1	1	0	1	0	0	0
X91	Assault (homicide) by hanging, strangulation, and suffocation	9	1	8	7	1	6	2	0	2
X93	Assault (homicide) by handgun discharge	7	6	1	1	1	0	6	5	1



TABLE C-15 1999

ICD CODE	Cause of Death	TOTALS		WHITE		BLACK		OTHER	
		TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM	TOT	MALE FEM
X94	Assault (homicide) by rifle, shotgun, and larger firearm discharge	2	1	1	0	1	1	0	0
X95	Assault (homicide) by other and unspecified firearm discharge	49	42	33	26	16	16	0	0
X97	Assault (homicide) by smoke, fire, and flames	4	2	4	2	0	0	0	0
X99	Assault (homicide) by sharp object	25	17	17	11	7	5	2	1
Y00	Assault (homicide) by blunt object	3	2	3	2	1	0	0	0
Y03	Assault (homicide) by crashing of motor vehicle	1	0	1	0	1	0	0	0
Y04	Assault (homicide) by bodily force	1	1	0	0	1	1	0	0
Y07	Other maltreatment syndromes	2	2	1	1	1	1	0	0
Y08	Assault (homicide) by other specified means	5	4	4	3	1	1	0	0
Y09	Assault (homicide) by unspecified means	19	13	12	7	6	5	1	1
Y10	Poisoning by and exposure to nonopioid analgesics, antipyretics, and antirheumatics, undetermined intent	2	1	2	1	1	0	0	0
Y11	Poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism, and psychotropic drugs, not elsewhere classified, undet intent	20	12	20	12	8	0	0	0
Y12	Poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], Not elsewhere classified, undetermined intent	337	243	314	223	91	22	19	3
Y14	Poisoning by and exposure to other and unspecified drugs, medicaments, and biological substances, undetermined intent	17	11	16	10	6	1	1	0
Y15	Poisoning by and exposure to alcohol, undetermined intent	3	3	3	3	0	0	0	0
Y17	Poisoning by and exposure to other gases and vapors, undetermined intent	2	1	2	1	1	0	0	0
Y20	Hanging, strangulation, and suffocation, undetermined intent	2	2	2	2	0	0	0	0
Y21	Drowning and submersion, undetermined intent	10	7	10	7	3	0	0	0
Y23	Rifle, shotgun, and larger firearm discharge, undetermined intent	1	1	1	1	0	0	0	0
Y24	Other and unspecified firearm discharge, undetermined intent	3	3	3	3	0	0	0	0
Y25	Contact with explosive material, undetermined intent	1	1	1	1	0	0	0	0
Y26	Exposure to smoke, fire, and flames, undetermined intent	5	2	5	2	3	0	0	0
Y28	Contact with sharp object, undetermined intent	1	1	1	1	0	0	0	0
Y30	Falling, jumping, or pushed from a high place, undetermined intent	1	1	1	1	0	0	0	0
Y31	Falling, lying, or running before or into moving object, undetermined intent	3	2	3	2	1	0	0	0
Y33	Other specified events, undetermined intent	2	1	2	1	1	0	0	0
Y34	Unspecified event, undetermined intent	7	4	7	4	3	0	0	0
Y35	Legal intervention	2	2	2	2	0	0	0	0
Y40	Systemic antibiotics	1	0	1	0	1	0	0	0
Y43	Primarily systemic agents	1	0	1	0	1	0	0	0
Y44	Agents primarily affecting blood constituents	1	0	1	0	1	0	0	0
Y45	Analgesics, antipyretics, and anti-inflammatory drugs	1	0	1	0	1	0	0	0
Y57	Other and unspecified drugs and medicaments	1	0	1	0	1	0	0	0
Y83	Surgical operation and other surgical proced as cause of abnormal reaction of patient or later complaint w/o ment misadventure at time of procedure	44	17	42	16	26	2	1	1
Y84	Other medical procedures as cause of abnormal reaction of patient, or later complication w/o mention of misadventure at time of procedure	2	1	2	1	1	0	0	0
Y85	Sequelae of transport accidents	4	1	4	1	3	0	0	0
Y86	Sequelae of other accidents	30	14	29	13	16	1	1	0



## INFANT & NEONATAL DEATHS



## SECTION D

### INFANT AND NEONATAL DEATHS

The total number of resident infant deaths (deaths of children less than 1 year of age) increased by 1.0% in Massachusetts from 414 in 1998 to 418 in 1999. The rate of infant deaths also increased -- from 5.1 infant deaths per 1,000 live births in 1998 to 5.2 infant deaths per 1,000 live births in 1999. As with live births and other deaths, all Massachusetts resident infant deaths are included regardless of the state in which they occurred. Neonatal deaths (deaths of infants under 28 days of age) increased from 315 in 1998 to 332 in 1999, an increase of 5.4%. The rate of neonatal deaths also increased, from 3.9 in 1998 to 4.1 in 1999.

#### INFANT DEATHS BY RACE

Beginning with the publication of 1989 data, several changes occurred in the method of calculating infant mortality rates (IMRs) by race and ethnicity. These changes affect only the calculation of race/ethnic infant mortality rates; all other data presented in this publication are comparable to information from previous years. These changes are the result of new federal recommendations for analyzing birth information, including infant mortality data, and the implementation of the new Massachusetts Standard Certificate of Death in 1989.

Infants born to black non-Hispanic mothers continue to have the highest infant mortality rates (IMRs). The IMR for black non-Hispanics in 1999 was 12.3 per 1,000 live births. This represents an increase of 1.7 (16.0%) from the 1998 rate, and it is over double the IMR for white non-Hispanic infants.

In 1999, the IMR for Hispanics declined by 18% from 6.7 to 5.5 per 1,000 live births. The mortality experience of infants born to Hispanic mothers is more similar to the experience of infants born to white non-Hispanic mothers than to black non-Hispanic mothers. The 1999 IMR of 5.5 for Hispanic infants is 17.0% higher than the white non-Hispanic rate (4.7) and 55.3% below the black non-Hispanic rate.

Asian mothers had the lowest rates of infant mortality compared to the other race/ethnicity groups. This is consistent with prior years with the exception of 1995. In 1999, the Asian IMR was 1.8 deaths per 1,000 live births. However, caution should be used when interpreting this rate since it is based on a small number (8) of deaths.

#### INFANT DEATHS BY CAUSE

“Certain conditions originating in the perinatal period” (medical conditions arising from approximately 28 weeks gestation to 28 days of age) was the leading cause of death for white, black, Asian and Hispanic infants. Congenital anomalies represented the second leading cause of death among white, Asian, and Hispanic infants, whereas Congenital anomalies tied “Symptoms, signs and ill-defined conditions” (primarily sudden infant death syndrome (SIDS)) for the second leading cause of death for black infants.

The overall leading causes of infant death were conditions arising in the perinatal period (261 deaths) and congenital anomalies (67 deaths), an 11.5% increase and a 14.1% decrease, respectively, from 1998. Other causes of infant death were: SIDS (24 deaths), "Disorders relating to short gestation and unspecified low birthweight" (94 deaths), "Other respiratory conditions of newborn (16 deaths), and homicide (4 deaths). There were 2 more deaths from SIDS in 1999 than there were in 1998, representing a 9.1% increase. The number of homicide deaths (4) doubled, but has remained relatively constant since 1994.

SIDS remains the leading cause of death in the post-neonatal period (28-364 days), while "disorders relating to short gestation and low birthweight" was the leading cause in the neonatal period.

## NEONATAL AND POST NEONATAL MORTALITY RATES

The neonatal mortality rate (infants less than 28 days old) was 4.1 deaths per 1,000 live births in 1999. Among white non-Hispanic mothers, the neonatal mortality rate increased slightly (5.7%), from 3.5 in 1998 to 3.7 in 1999. During this same time period, the rate increased by 16.5% among black non-Hispanic mothers (from 8.5 in 1998 to 9.9 in 1999) and decreased by 12% among Hispanic mothers (from 5.0 in 1998 to 4.4 in 1999). Among Asians, the number of neonatal deaths decreased 28.6% from 7 to 5 between 1998 and 1999. (These rates should be interpreted cautiously since they are based on very few deaths.)

The overall post neonatal mortality rate, representing the number of deaths of infants between 28 and 364 days of age per 1,000 live births, was slightly less in 1999 than in 1998, declining from 1.2 to 1.1. The post neonatal mortality rate among infants of white non-Hispanic mothers declined between 1999 and 1998 going from 1.1 to 1.0 deaths per 1,000 live births. Among infants of black non-Hispanic mothers, there was an increase of 9.1% between 1998 and 1999, from 2.2 to 2.4 deaths per 1,000 births.

There was a decrease in the rate of post neonatal deaths among Hispanics, from 1.7 to 1.1, corresponding to a rate decrease of 35.3%. The number of post neonatal deaths among Asians did not change from 1998 to 1999 (3 deaths).

## DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:

### INFANT DEATH

Death of a child whose age is less than one year (365 days).

### NEONATAL DEATH

Death of a child whose age is less than 28 days.

### POST NEONATAL DEATH

Death of a child whose age is at least 28 days, but less than one year.

RATES IMPORTANT FOR THIS SECTION INCLUDE:

INFANT MORTALITY RATE (IMR)	$\frac{\text{\# of Resident Deaths at Less than 1 Year of Age} \times 1,000}{\text{Total Resident Live Births}}$
NEONATAL MORTALITY RATE (NMR)	$\frac{\text{\# of Resident Deaths at Less than 28 Days of Age} \times 1,000}{\text{Total Resident Live Births}}$
POST NEONATAL MORTALITY RATE (PNMR)	$\frac{\text{\# of Resident Deaths at Least 28 Days Old but <365 Days Old} \times 1,000}{\text{Total Resident Live Births}}$

Figure D-1. Infant Mortality Rates by Race, Massachusetts: 1980-1999

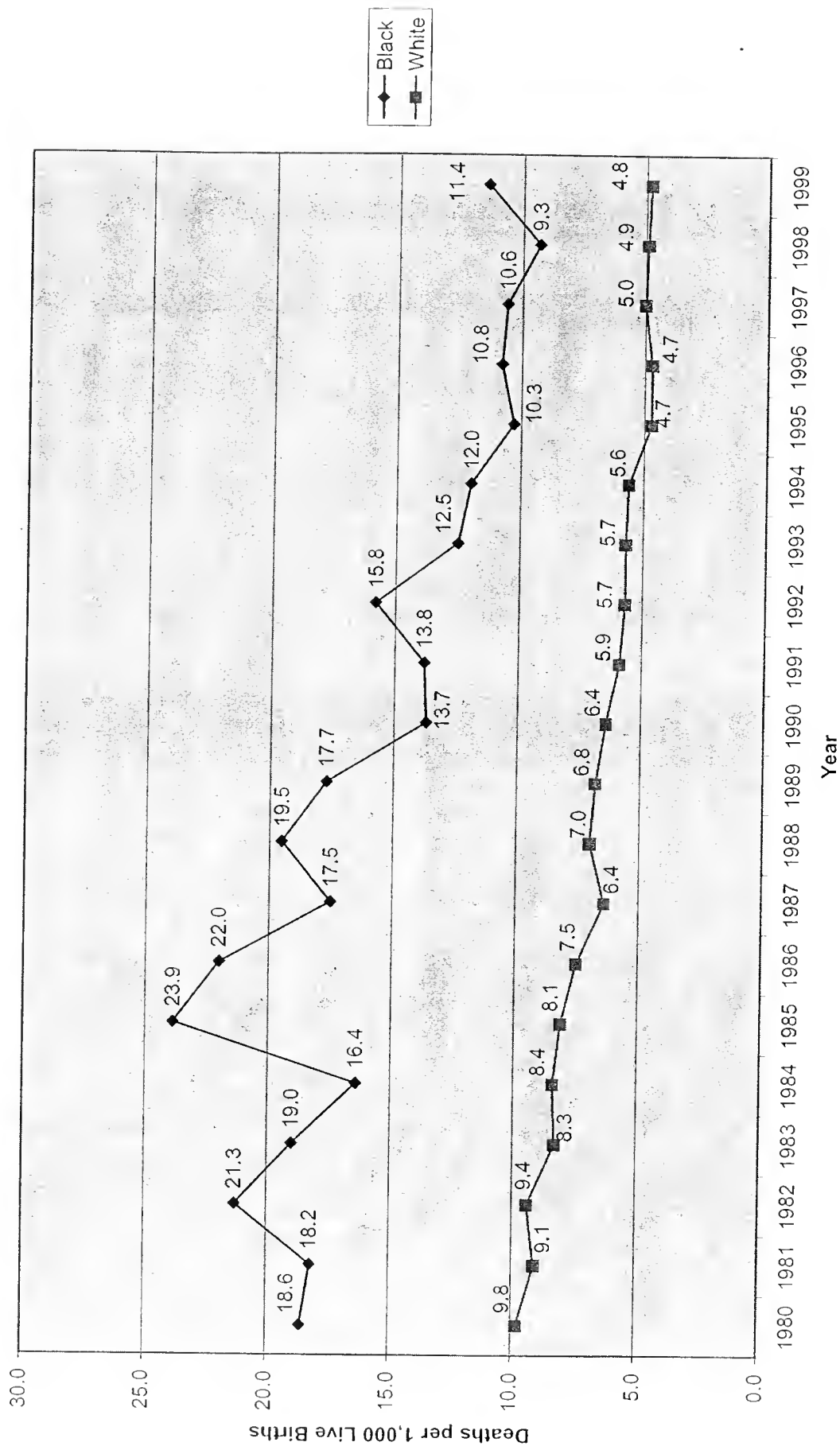
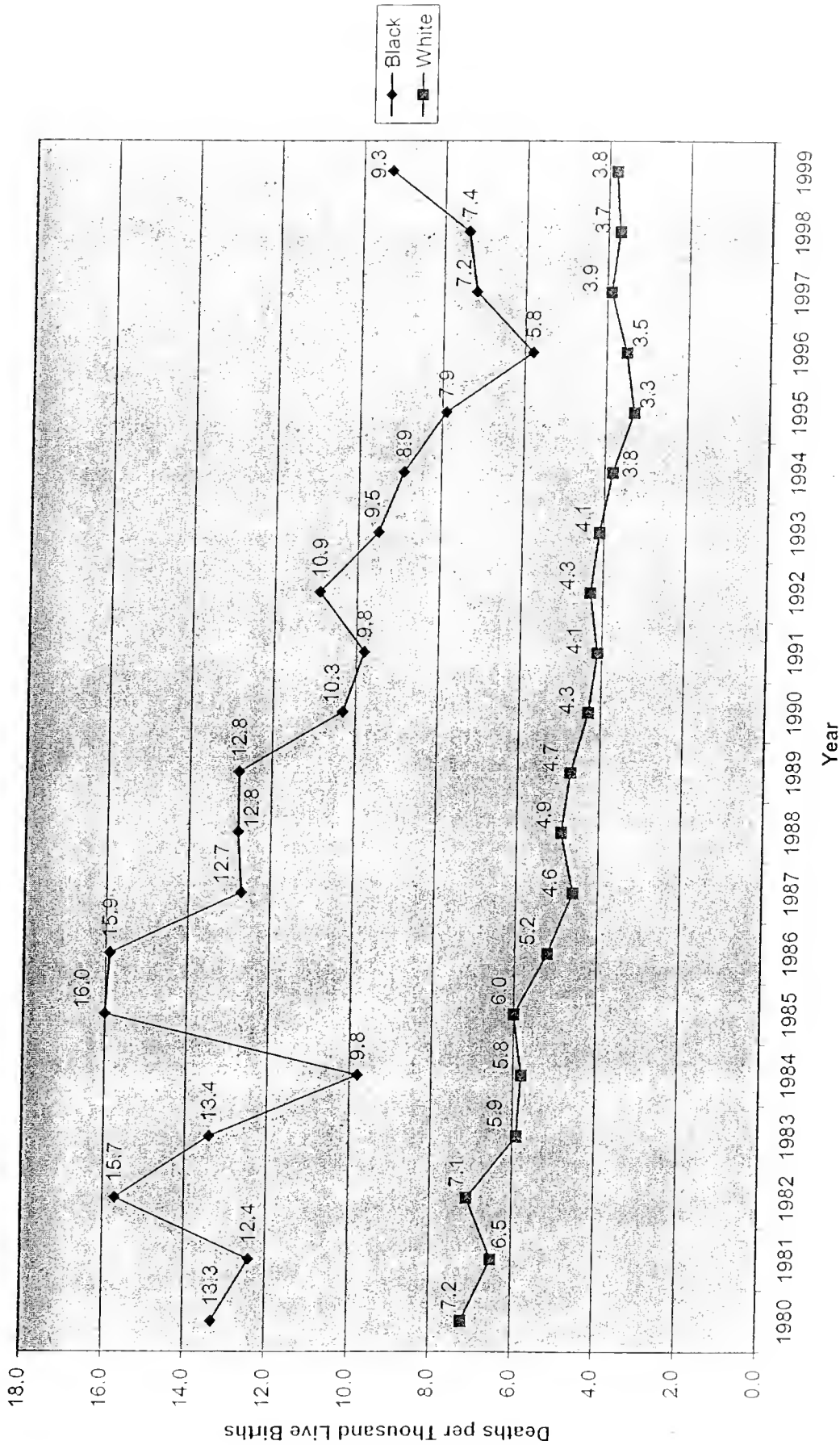




Figure D-2. Neonatal Mortality Rates by Race, Massachusetts: 1980-1999



**Table D-1. Trends in Infant, Neonatal, and Post Neonatal Mortality, by Race and Hispanic Ethnicity, Massachusetts: 1990-1999**

**INFANT MORTALITY**

Year	State Total <sup>1</sup>		White, non-Hispanic		Black, non-Hispanic		Hispanic		Asian/Pacific Islander, non-Hispanic		Other <sup>2</sup>	
	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>
1990	649	7.0	442	6.1	98	13.7	77	9.1	24	7.0	8	9.5
1991	577	6.5	381	5.5	101	15.0	80	9.4	14	4.2	1	-- <sup>4</sup>
1992	569	6.5	371	5.5	110	16.4	67	7.9	16	4.9	5	5.1
1993	523	6.2	346	5.3	84	13.1	77	9.3	13	3.9	3	-- <sup>4</sup>
1994	499	6.0	343	5.3	79	12.6	64	7.6	8	2.4	5	5.3
1995	419	5.1	275	4.4	65	11.1	58	7.2	19	5.5	2	-- <sup>4</sup>
1996	403	5.0	289	4.7	63	11.4	40	5.1	8	2.2	2	-- <sup>4</sup>
1997	425	5.3	294	4.8	64	11.7	55	6.7	10	2.6	2	-- <sup>4</sup>
1998	414	5.1	287	4.6	59	10.6	58	6.7	10	2.7	0	0.0
1999	418	5.2	285	4.7	72	12.3	49	5.5	8	1.9	4	-- <sup>4</sup>

**NEONATAL MORTALITY**

Year	State Total <sup>1</sup>		White, non-Hispanic		Black, non-Hispanic		Hispanic		Asian/Pacific Islander, non-Hispanic		Other <sup>2</sup>	
	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>
1990	446	4.8	298	4.1	75	10.5	49	5.8	19	5.5	5	5.5
1991	401	4.5	266	3.9	72	10.7	53	6.2	10	3.0	0	0.0
1992	415	4.8	274	4.0	76	11.4	51	6.0	10	3.0	4	-- <sup>4</sup>
1993	375	4.4	245	3.7	64	10.0	55	6.7	9	2.7	2	-- <sup>4</sup>
1994	349	4.2	240	3.7	58	9.3	40	4.7	7	2.1	4	-- <sup>4</sup>
1995	298	3.6	198	3.1	50	8.5	39	4.8	10	2.9	1	-- <sup>4</sup>
1996	290	3.6	222	3.6	34	6.2	27	3.5	5	1.4	1	-- <sup>4</sup>
1997	323	4.0	228	3.7	44	8.0	43	5.2	7	1.8	1	-- <sup>4</sup>
1998	315	3.9	218	3.5	47	8.5	43	5.0	7	1.9	0	0.0
1999	332	4.1	226	3.7	58	9.9	39	4.4	5	1.2	4	-- <sup>4</sup>

**POST NEONATAL MORTALITY**

Year	State Total <sup>1</sup>		White, non-Hispanic		Black, non-Hispanic		Hispanic		Asian/Pacific Islander, non-Hispanic		Other <sup>2</sup>	
	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>
1990	203	2.2	144	2.0	23	3.2	28	3.3	5	1.5	3	-- <sup>4</sup>
1991	176	2.0	115	1.7	29	4.3	27	3.2	4	-- <sup>4</sup>	1	-- <sup>4</sup>
1992	154	1.8	97	1.4	34	5.1	16	1.9	6	1.8	1	-- <sup>4</sup>
1993	148	1.7	101	1.5	20	3.1	22	2.7	4	-- <sup>4</sup>	1	-- <sup>4</sup>
1994	150	1.8	103	1.6	21	3.3	24	2.8	1	-- <sup>4</sup>	1	-- <sup>4</sup>
1995	121	1.5	77	1.2	15	2.6	19	2.3	9	2.6	1	-- <sup>4</sup>
1996	113	1.4	67	1.1	29	5.3	13	1.7	3	-- <sup>4</sup>	1	-- <sup>4</sup>
1997	102	1.3	66	1.1	20	3.7	12	1.5	3	-- <sup>4</sup>	1	-- <sup>4</sup>
1998	99	1.2	69	1.1	12	2.2	15	1.7	3	-- <sup>4</sup>	0	0.0
1999	86	1.1	59	1.0	14	2.4	10	1.1	3	-- <sup>4</sup>	0	0.0

1. Deaths of infants of unknown race are included in the total calculation. For rate computations, births of infants of unknown race are allocated into the race categories according to the distribution of births of known race. 2. Other: American Indian and Other races. 3. Rates are expressed per 1,000 live births. 4. Calculations based on fewer than five events are excluded.

**Table D-2. Trends in Infant, Neonatal, and Post Neonatal Mortality, by Race<sup>1</sup>, Massachusetts: 1980-1999**

INFANT MORTALITY								
Year	State Total <sup>2</sup>		White		Black		Asian/Other <sup>3</sup>	
	#	Rate <sup>4</sup>	#	Rate <sup>4</sup>	#	Rate <sup>4</sup>	#	Rate <sup>4</sup>
1980	748	10.3	655	9.8	87	18.6	5	4.6
1981	710	9.6	616	9.1	85	18.2	8	6.1
1982	764	10.1	656	9.4	102	21.3	5	3.3
1983	682	9.0	579	8.3	89	19.0	12	7.4
1984	699	8.9	601	8.4	82	16.4	13	7.5
1985	745	9.1	608	8.1	126	23.8	11	6.1
1986	695	8.4	560	7.5	123	22.0	11	4.6
1987	608	7.2	486	6.4	110	17.5	12	4.5
1988	693	7.9	546	7.0	133	19.5	13	3.8
1989	697	7.6	549	6.8	131	17.7	17	4.8
1990	649	7.0	519	6.4	106	13.7	24	6.5
1991	577	6.5	461	6.0	102	13.8	14	3.9
1992	569	6.5	438	5.7	114	15.8	17	4.7
1993	523	6.2	423	5.7	87	12.5	13	3.5
1994	499	6.0	407	5.6	81	12.0	11	2.9
1995	419	5.1	333	4.7	65	10.3	21	5.5
1996	403	5.0	329	4.7	65	10.8	8	2.0
1997	425	5.3	349	5.0	66	10.6	10	2.4
1998	414	5.1	345	4.9	59	9.3	10	2.3
1999	418	5.2	334	4.8	75	11.4	9	1.9

NEONATAL MORTALITY								
Year	State Total <sup>2</sup>		White		Black		Asian/Other <sup>3</sup>	
	#	Rate <sup>4</sup>	#	Rate <sup>4</sup>	#	Rate <sup>4</sup>	#	Rate <sup>4</sup>
1980	550	7.6	483	7.2	62	13.3	5	4.6
1981	510	6.9	442	6.5	59	12.4	5	3.8
1982	573	7.6	494	7.1	75	15.7	3	-- <sup>5</sup>
1983	482	6.3	411	5.9	63	13.4	7	4.3
1984	472	6.0	411	5.8	49	9.8	8	4.6
1985	538	6.6	447	6.0	85	16.0	5	2.8
1986	478	5.8	383	5.2	89	15.9	5	2.1
1987	432	5.1	343	4.6	80	12.7	9	3.4
1988	477	5.4	383	4.9	87	12.8	6	1.8
1989	479	5.2	376	4.7	95	12.8	8	2.3
1990	446	4.8	347	4.3	80	10.3	9	5.1
1991	401	4.5	319	4.1	72	9.8	10	2.8
1992	415	4.8	325	4.3	79	10.9	11	3.1
1993	375	4.4	300	4.1	66	9.5	9	2.4
1994	349	4.2	280	3.8	60	8.9	9	2.4
1995	298	3.6	237	3.3	50	7.9	11	2.9
1996	290	3.6	249	3.5	35	5.8	5	1.2
1997	323	4.0	271	3.9	45	7.2	7	1.7
1998	315	3.9	261	3.7	47	7.4	7	1.6
1999	332	4.1	265	3.8	61	9.3	6	1.3

Table D-2 (cont'd). Trends in Infant, Neonatal, and Post Neonatal Mortality, by Race<sup>1</sup>, Massachusetts: 1980-1999

POST NEONATAL MORTALITY								
Year	State Total <sup>2</sup>		White		Black		Asian/Other <sup>3</sup>	
	#	Rate <sup>4</sup>	#	Rate <sup>4</sup>	#	Rate <sup>4</sup>	#	Rate <sup>4</sup>
1980	198	2.7	172	2.6	25	5.3	0	0.0
1981	200	2.7	174	2.6	26	5.8	3	-- <sup>5</sup>
1982	191	2.5	162	2.3	27	5.6	2	-- <sup>5</sup>
1983	200	2.7	168	2.4	26	5.6	5	3.1
1984	227	2.9	190	2.6	33	6.6	5	2.9
1985	207	2.5	161	2.1	41	7.8	6	3.3
1986	217	2.6	177	2.3	34	6.1	6	2.5
1987	176	2.1	143	1.8	30	4.8	3	-- <sup>5</sup>
1988	216	2.5	163	2.1	46	6.7	7	2.0
1989	218	2.4	173	2.1	36	4.9	9	2.5
1990	203	2.2	172	2.1	26	3.4	5	1.4
1991	176	2.0	142	1.8	30	4.1	4	-- <sup>5</sup>
1992	154	1.8	113	1.5	35	4.8	6	1.7
1993	148	1.7	123	1.7	21	3.0	4	-- <sup>5</sup>
1994	150	1.8	127	1.7	21	3.1	2	-- <sup>5</sup>
1995	121	1.5	96	1.3	15	2.4	10	2.6
1996	113	1.4	80	1.1	30	5.0	3	-- <sup>5</sup>
1997	102	1.3	78	1.1	21	3.4	3	-- <sup>5</sup>
1998	99	1.2	84	1.2	12	1.9	3	-- <sup>5</sup>
1999	86	1.1	69	1.0	14	2.1	3	-- <sup>5</sup>

1. Hispanic origin could not be identified from the Massachusetts death certificate before 1989, thus, Hispanic trend data are not available. Most Hispanics are included in the race category of white. 2. Deaths of infants of unknown race are included in the total calculation. For rate computations, infants of unknown race are allocated into the race categories according to the distribution of births of known race. 3. Other: American Indian and Other races. 4. Rates are expressed per 1,000 live births. 5. Calculations based on fewer than five events are excluded.

**Table D-3. Infant, Neonatal, and Post Neonatal Deaths by Cause, Massachusetts: 1999**

Cause of Death <sup>1</sup>	ICD-10 Code	#	%2,3	#	%2,3	#	%2,3
<b>TOTAL</b>		<b>418</b>	<b>100%</b>	<b>332</b>	<b>100%</b>	<b>86</b>	<b>100%</b>
Infectious and parasitic diseases							
Cancer	A00-B99	4	--	2	--	2	--
Diseases of the blood and blood forming organs (anemia)	C00-C97	2	--	0	0.0	2	--
Diseases of nervous system and ear	D50-D89	1	--	0	0.0	1	--
Diseases of the respiratory system	G00-G98, H60-H93	3	--	0	0.0	3	--
Diseases of digestive system	J00-J98	11	2.6	1	--	10	11.6
Congenital malformations	K00-K92	4	--	1	--	3	--
Congenital malformations of nervous system	Q00-Q99	67	16.0	59	17.8	8	9.3
Anencephalus and similar malformations	Q00-Q07	11	--	9	--	2	--
Congenital malformations of eye, ear, face, and neck	Q10-Q18	7	--	7	--	0	0.0
Congenital malformations of heart	Q20-Q24	0	--	0	--	0	0.0
Other congenital malformations of circulatory system	Q25-Q28	12	--	11	--	1	--
Congenital malformations of respiratory system	Q30-Q34	1	--	1	--	0	0.0
Cleft palate and other digestive tract malformations	Q35-Q45	15	--	14	--	1	--
Congenital malformations of genitourinary system	Q50-Q64	4	--	2	--	2	--
Congenital malformations of musculoskeletal system	Q65-Q85	3	--	3	--	0	0.0
Chromosomal abnormalities	Q86-Q99	4	--	3	--	1	--
<b>Certain conditions originating in the perinatal period</b>		<b>11</b>	<b>--</b>	<b>10</b>	<b>--</b>	<b>1</b>	<b>--</b>
Newborn affected by maternal conditions which may be unrelated to present pregnancy	P00-P96	261	62.4	252	75.9	9	10.5
Newborn affected by maternal complications of pregnancy	P00	1	--	1	--	0	0.0
Newborn affected by complications of placenta, cord and membrane	P01	21	--	21	--	0	0.0
Newborn affected by other complications of labor and delivery	P02	18	--	17	--	1	--
Disorders relating to short gestation and low birthweight	P03	3	--	3	--	0	0.0
Birth trauma	P07	94	--	94	--	0	0.0
Intrauterine hypoxia and birth asphyxia	P10-P15	0	--	0	--	0	0.0
Respiratory distress of newborn	P20-P21	13	--	12	--	1	--
Other respiratory conditions of newborn	P22	19	--	18	--	1	--
Infections specific to the perinatal period	P23-P28	18	--	16	--	2	--
Neonatal hemorrhage	P35-P39	16	--	13	--	3	--
Other and ill-defined conditions originating in the perinatal period	P50-P52, P54	4	--	4	--	0	0.0
<b>Symptoms, signs, and ill-defined conditions</b>		<b>13</b>	<b>--</b>	<b>12</b>	<b>--</b>	<b>1</b>	<b>--</b>
Sudden Infant Death Syndrome (SIDS)	P90-P96	30	7.2	5	1.5	25	29.1
Unintentional Injuries	R00-R99	24	--	4	--	20	--
Homicide	V01-X59, Y85-Y86	6	1.4	0	0.0	6	7.0
All other causes	X85-Y09, Y87.1	4	--	0	--	4	--
<b>Residual</b>		<b>25</b>	<b>6.0</b>	<b>12</b>	<b>3.6</b>	<b>13</b>	<b>15.1</b>

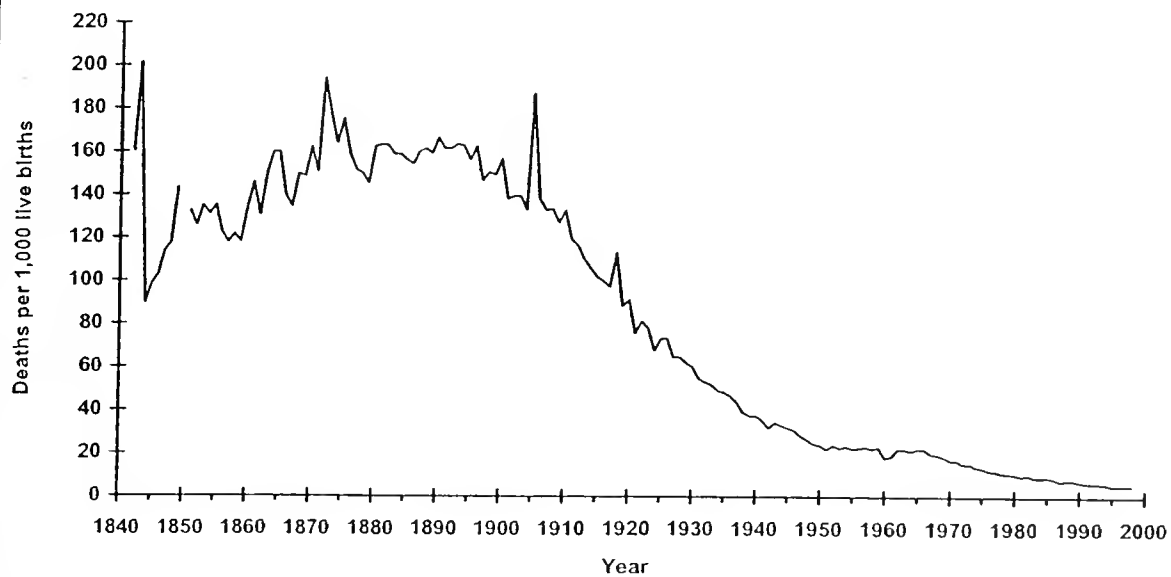
1. Please refer to page 121 for an explanation of ICD-10 codes. 2. Percents not calculated for subcategories. 3. Calculations based on fewer than five events are excluded.

Table D-4. Infant Deaths by Major Causes, Race and Hispanic Ethnicity,  
Massachusetts: 1999

Cause of Death <sup>2</sup>	ICD-10 Code	White, non- Hispanic <sup>1</sup>		Black, non- Hispanic <sup>1</sup>		Asian/Pacific Islander, non- Hispanic <sup>1</sup>		Hispanic	
		#	%	#	%	#	%	#	%
<b>TOTAL</b>		285	100%	75	100%	8	100%	49	100%
Congenital malformations	Q00-Q99	52	18.2	4	-- <sup>3</sup>	0	0.0	11	22.4
Certain conditions originating in the perinatal period	P00-P96	172	60.4	56	74.7	4	-- <sup>3</sup>	28	57.1
Symptoms, signs, and ill-defined conditions	R00-R99	19	6.7	4	-- <sup>3</sup>	1	-- <sup>3</sup>	6	12.2
Unintentional Injuries	V01-X59, Y85-Y86	4	-- <sup>3</sup>	2	-- <sup>3</sup>	0	0.0	0	0.0
Homicide	X85-Y09, Y87.1	3	-- <sup>3</sup>	1	-- <sup>3</sup>	0	0.0	0	0.0
All other causes	Residual	35	12.3	8	10.7	3	-- <sup>3</sup>	4	-- <sup>3</sup>

1. Race categories presented in this report differ from previously published data. Race and ethnicity data in this table are presented as mutually exclusive categories; persons of Hispanic ethnicity are not included in a race category. Please refer to the Section Definitions for a more detailed explanation. 2. Deaths are coded according to ICD-10. 3. Calculations based on fewer than five events are excluded.

Figure D-3. Infant Mortality Rates, Massachusetts: 1842-1999







## MARRIAGES & DIVORCES



## SECTION E

### MARRIAGES AND DIVORCES

Marriages and divorces are reported by place of occurrence in Massachusetts. For example, if two Boston residents are married in Barnstable, this marriage will be reported by place of occurrence (Barnstable) rather than the residence of the couple (Boston). Marriages have traditionally been reported in this manner because of the number of couples who live in different communities. Additionally, out-of-state residents who marry in Massachusetts are included in these data.

Marriages and divorces which involve Massachusetts residents, but occur in other states, are not included in these figures. No system of interstate exchange exists for these events. Unlike some states, Massachusetts marriage and divorce laws neither encourage out-of-state residents to come to the state nor discourage residents from using the Massachusetts system by imposing long waiting periods, etc. This allows the marriage data to be used to estimate resident marriages.

In 1999, 39,425 marriages occurred in Massachusetts compared to 38,722 in 1998, an increase of 1.8%. The rate of marriages was at 6.2 per 1,000 population in 1998, the rate was 6.2 in 1999 as well. The 1999 US rate of marriages per 1,000 population was 8.3, slightly lower than the 1998 US rate of 8.4. Of all brides in Massachusetts in 1999, 74.0% had never previously been married. This percentage was slightly lower among the grooms--72.8%.

In 1999, 15,632 divorces were granted in Massachusetts, a decrease of 2.4% from the 16,010 divorces granted in 1998. The 1999 rate of divorce per 1,000 population in Massachusetts was 2.5, roughly equivalent to the 1998 divorce rate. This rate was well below the 1999 US rate of 4.1 divorces per 1,000 population.

#### RATES IMPORTANT FOR THIS SECTION INCLUDE:

MARRIAGE RATE	$\frac{\text{Number of Occurrence Marriages}}{\text{Total Population}} \times 1,000$
---------------	--

DIVORCE RATE	$\frac{\text{Number of Occurrence Divorces}}{\text{Total Population}} \times 1,000$
--------------	---

**Table E-1. Marriages and Divorces by County**

**Massachusetts Occurrence: 1999**

	<u>Marriages</u>	<u>Divorces</u>
State Total	39,425	15,632
<u>Counties</u>		
Barnstable	2,454	579
Bershire	990	444
Bristol	3,145	1,432
Dukes	489	63
Essex	4,625	1,831
Franklin	469	287
Hampden	2,810	1,379
Hampshire	811	305
Middlesex	8,053	2,753
Nantucket	320	43
Norfolk	3,455	1,478
Plymouth	2,738	1,396
Suffolk	4,498	1,430
Worcester	4,568	2,212

Figure E-1. Rates of Marriage and Divorce per 1,000 Population, Massachusetts: 1900-1999

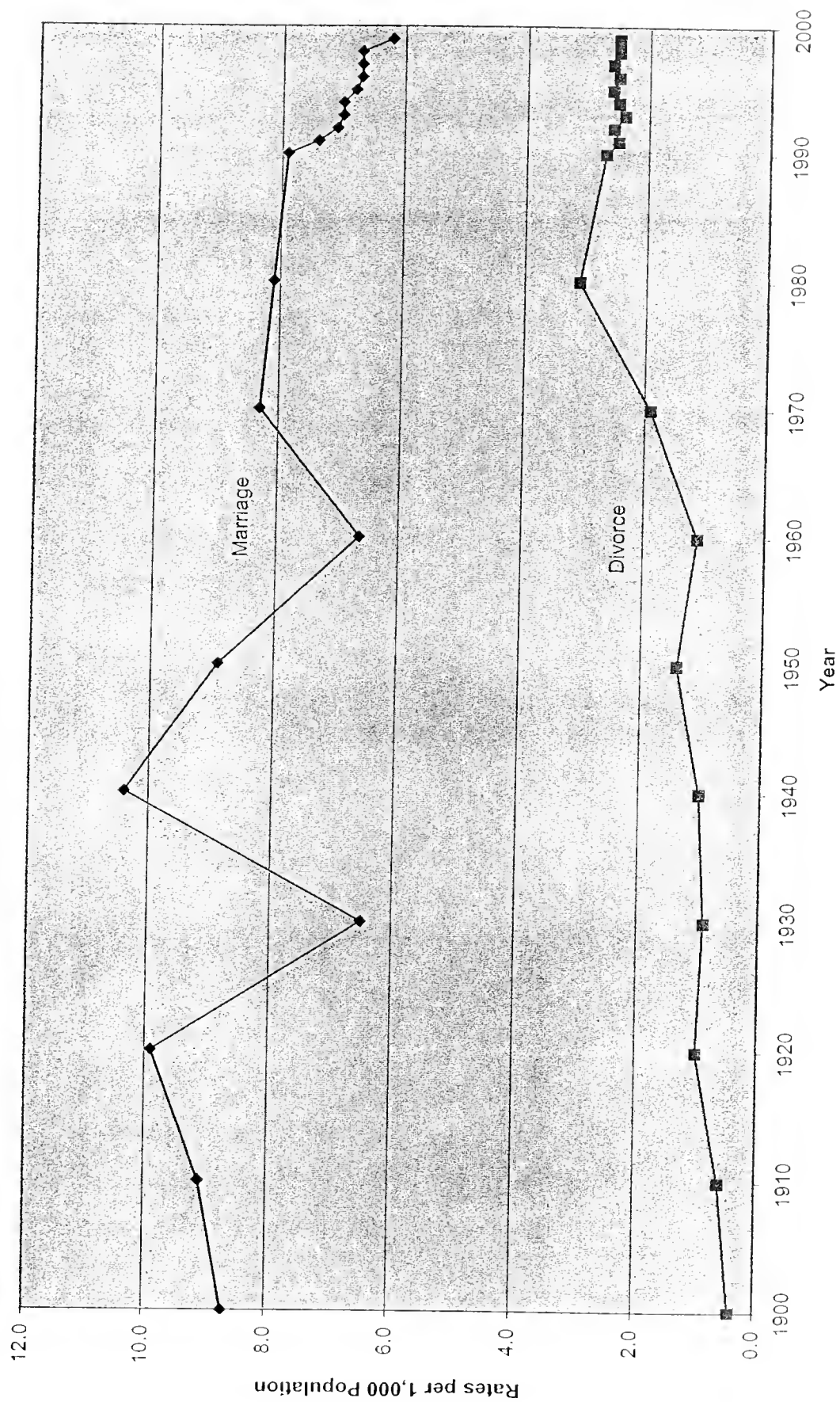


Table E-2. Marriages and Divorces and Rates per 1,000 Population

## Massachusetts Occurrence, Selected Years: 1900-1999

Year	<u>Marriages</u>		<u>Divorces</u>	
	Number	Rate	Number	Rate
1900	24,342	8.7	1,258	0.4
1905	27,184	9.1	1,554	0.5
1910	30,710	9.1	1,929	0.6
1915	31,301	8.5	2,252	0.6
1920	38,048	9.9	3,647	1.0
1925	31,238	7.5	3,395	0.8
1930	27,431	6.5	3,746	0.9
1935	30,019	6.9	4,081	0.9
1940	44,836	10.4	4,502	1.0
1945	38,197	8.5	6,833	1.5
1950	41,711	8.9	6,365	1.4
1955	35,585	7.3	5,601	1.2
1960	34,050	6.6	5,592	1.1
1965	38,281	7.2	7,728	1.5
1970	47,292	8.3	10,818	1.9
1975	42,103	7.3	16,460	2.8
1980	46,273	8.1	17,873	3.1
1985	49,849	8.6	21,573	3.7
1986	49,990	8.6	19,809	3.4
1987	49,034	8.4	16,994	2.9
1988	49,941	8.5	17,676	3.0
1989	49,174	8.4	16,819	2.9
1990	47,786	7.9	16,258	2.7
1991	44,621	7.4	14,987	2.5
1992	43,228	7.1	15,411	2.5
1993	42,355	7.0	14,435	2.4
1994	42,503	7.0	15,450	2.5
1995	41,522	6.8	15,772	2.6
1996	41,234	6.7	15,485	2.5
1997	41,528	6.7	15,942	2.6
1998	38,722	6.2	16,010	2.6
1999	39,425	6.2	15,632	2.5

Table E-3. Marriages by Age and Marital Status

Massachusetts Occurrence: 1999

Bride

Age	Total Number	%	Single Number	%	Widowed Number	%	Divorced Number	%
Total	39,424	100.0%	29,169	74.0%	860	2.2%	9,395	23.8%
<20	968	100.0%	965	99.7%	0	0.0%	3	0.3%
20-29	19,857	100.0%	18,769	94.5%	25	0.1%	1,063	5.4%
30-39	12,303	100.0%	8,077	65.7%	114	0.9%	4,112	33.4%
40-49	4,287	100.0%	1,158	27.0%	231	5.4%	2,898	67.6%
50-59	1,479	100.0%	167	11.3%	199	13.5%	1,113	75.3%
60-69	394	100.0%	23	5.8%	185	47.0%	186	47.2%
70+	136	100.0%	10	7.4%	106	77.9%	20	14.7%

Groom

Age	Total Number	%	Single Number	%	Widowed Number	%	Divorced Number	%
Total	39,425	100.0%	28,703	72.8%	859	2.2%	9,863	25.0%
<20	322	100.0%	322	100.0%	0	0.0%	0	0.0%
20-29	16,186	100.0%	15,603	96.4%	6	0.0%	577	3.6%
30-39	14,470	100.0%	10,766	74.4%	52	0.4%	3,652	25.2%
40-49	5,255	100.0%	1,723	32.8%	121	2.3%	3,411	64.9%
50-59	2,144	100.0%	240	11.2%	195	9.1%	1,709	79.7%
60-69	721	100.0%	41	5.7%	244	33.8%	436	60.5%
70+	327	100.0%	2	2.5%	241	73.7%	78	23.9%

Table E-4. Number of Marriages by Age of Bride and Age of Groom								
Massachusetts Occurrence: 1999								
Age of Groom								
Age of Bride	Total	<20	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70+
Total	39,424	322	16,186	14,469	5,255	2,144	721	327
<20	968	184	712	67	5	0	0	0
20-29	19,857	127	13,380	5,815	476	51	6	2
30-39	12,303	10	1,986	7,573	2,377	321	31	5
40-49	4,287	1	96	938	2,098	975	161	18
50-59	1,479	0	12	72	286	729	317	63
60-69	394	0	0	4	12	68	185	125
70+	136	0	0	0	1	0	21	114

Table E-5. Number of Marriages for Bride by Number of Marriages for Groom						
Massachusetts Occurrence: 1999						
Number of Marriages Groom						
Bride	Total	1	2	3	4	5+
Total	39,423	28,701	8,941	1,565	192	24
1	29,169	24,772	3,953	400	38	6
2	8,504	3,506	4,074	810	103	11
3	1,551	383	816	314	33	5
4	182	37	87	39	17	2
5+	17	3	11	2	1	0



## POPULATION



## **SECTION F**

### **POPULATION**

The population data in this section are presented for use in computing rates for small areas and for reporting changes over time by municipality and county. They are based primarily on the US Federal Census for 1990.

All additional interpolations and calculations have been provided by Bruce B. Cohen and Alison Donta, Division of Research and Epidemiology, Bureau of Health Statistics, Research and Evaluation, Massachusetts Department of Public Health. The 1999 population estimates are extrapolations of the 1990 US Federal Census and MISER estimates for 1995.

In 1999, there were an estimated 6,332,530 residents of Massachusetts. This represents a 6.7% increase in population since 1987, when the population numbered 5,932,611. Among the total 1999 population in Massachusetts, 48.4% were male, 26.0% were below the age of 20, and 6.4% were over 75 years of age.

Figure F-1. Massachusetts Population: 1900-1999

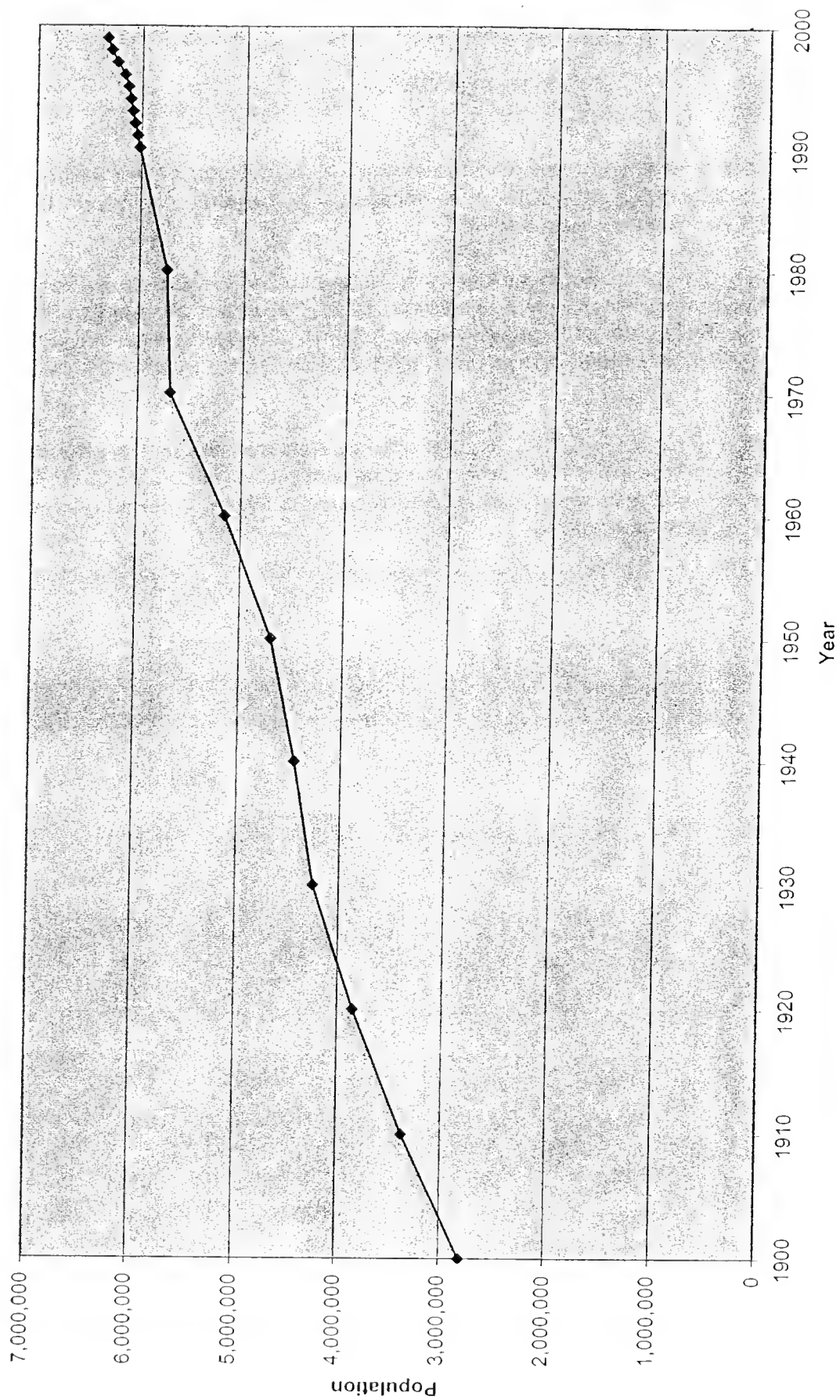


Table F-1. Population by Race, Age, and Sex; Massachusetts:1990<sup>1</sup>

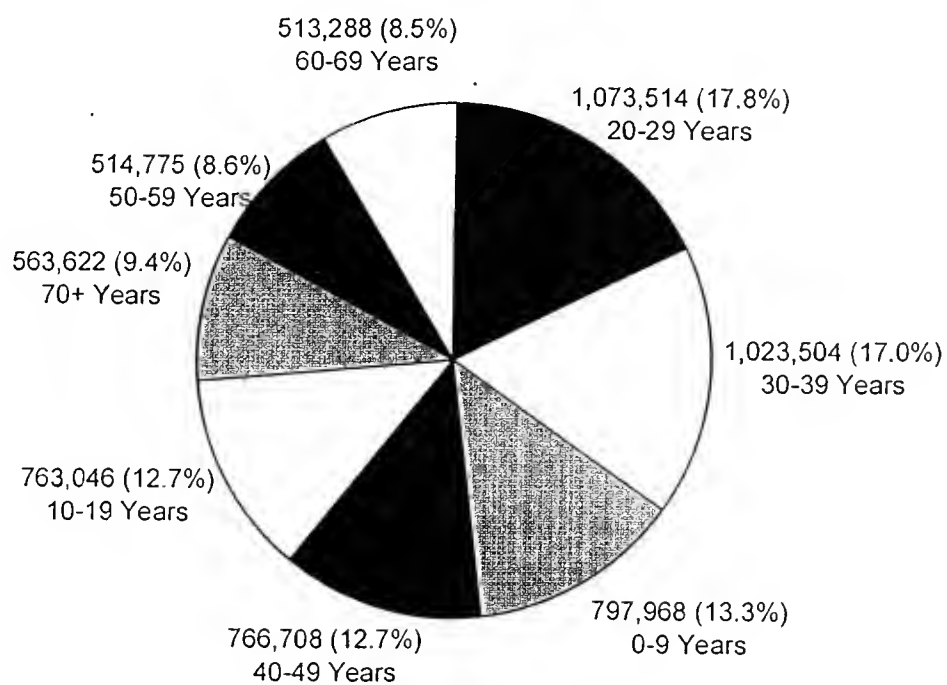
Age	Sex	Total	White	Black	Other <sup>2</sup>
Under 1	Male	46,018	40,463	3,925	1,630
	Female	44,125	38,546	3,926	1,653
	Total	90,143	79,009	7,851	3,283
1-4	Male	169,427	149,849	13,663	5,915
	Female	161,779	142,349	13,489	5,941
	Total	331,206	292,198	27,152	11,856
5-9	Male	193,482	172,170	14,393	6,919
	Female	183,137	162,336	14,104	6,697
	Total	376,619	334,506	28,497	13,616
10-14	Male	177,899	159,257	13,226	5,416
	Female	169,117	150,743	12,916	5,458
	Total	347,016	310,000	26,142	10,874
15-19	Male	209,289	187,227	14,627	7,435
	Female	206,741	184,529	14,595	7,617
	Total	416,030	371,756	29,222	15,052
20-24	Male	256,657	231,290	16,344	9,023
	Female	260,537	234,182	17,002	9,353
	Total	517,194	465,472	33,346	18,376
25-29	Male	277,295	251,142	16,785	9,368
	Female	279,025	252,738	17,311	8,976
	Total	556,320	503,880	34,096	18,344
30-34	Male	268,701	244,766	15,346	8,589
	Female	273,629	249,299	15,867	8,463
	Total	542,330	494,065	31,213	17,052
35-39	Male	237,202	217,981	12,403	6,818
	Female	243,972	223,847	13,153	6,972
	Total	481,174	441,828	25,556	13,790
40-44	Male	211,399	196,542	9,811	5,046
	Female	221,975	206,029	10,619	5,327
	Total	433,374	402,571	20,430	10,373

<sup>1</sup> Figures are from the U.S. Census.<sup>2</sup> Other Races include Asian, American Indian, Hawaiian, and others not specified.

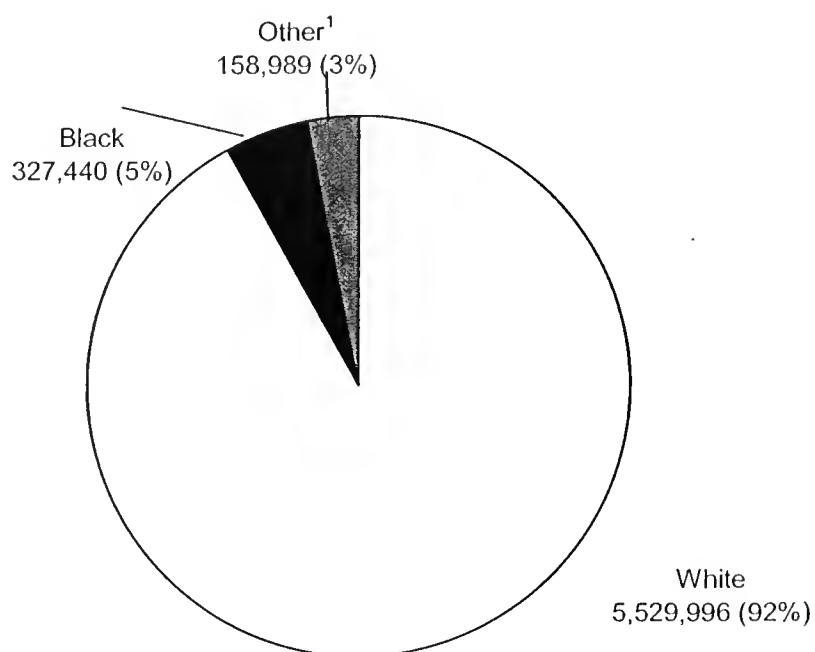
Table F-1. (Continued) Population by Race, Age, and Sex; Massachusetts:1990

Age	Sex	Total	White	Black	Other
45-49	Male	162,636	152,146	7,024	3,466
	Female	170,698	159,100	8,211	3,387
	Total	333,334	311,246	15,235	6,853
50-54	Male	126,581	118,555	5,246	2,780
	Female	136,020	127,187	6,274	2,559
	Total	262,601	245,742	11,520	5,339
55-59	Male	120,175	113,887	4,238	2,050
	Female	131,999	124,575	5,263	2,161
	Total	252,174	238,462	9,501	4,211
60-64	Male	121,609	116,299	3,762	1,548
	Female	140,296	133,558	4,844	1,894
	Total	261,905	249,857	8,606	3,442
65-69	Male	110,424	106,135	3,064	1,225
	Female	140,959	135,442	4,083	1,434
	Total	251,383	241,577	7,147	2,659
70-74	Male	85,541	82,863	1,965	713
	Female	121,790	117,883	2,973	934
	Total	207,331	200,746	4,938	1,647
75-79	Male	59,037	57,350	1,199	488
	Female	100,616	97,776	2,156	684
	Total	159,653	155,126	3,355	1,172
80-84	Male	33,468	32,561	669	238
	Female	72,831	71,105	1,338	388
	Total	106,299	103,666	2,007	626
85+	Male	21,905	21,324	439	142
	Female	68,434	66,965	1,187	282
	Total	90,339	88,289	1,626	424
Total	Male	2,888,745	2,651,807	158,129	78,809
	Female	3,127,680	2,878,189	169,311	80,180
	Total	6,016,425	5,529,996	327,440	158,989

**Figure F-2. 1990 Massachusetts Population by Age Group**



**Figure F-3. 1990 Massachusetts Population by Race**



1. Other races include Asian, American Indian, Hawaiian, and others not specified.



**Table F-2. Massachusetts Population by County: 1930-1990**

	1930	1940	1950	1960	1970	1980	1990
<b>State</b>	4,249,614	4,316,721	4,690,514	5,148,578	5,689,170	5,737,037	6,016,425
<u>Counties</u>							
Barnstable	32,305	37,295	46,805	70,286	96,656	147,925	186,605
Berkshire	120,700	122,273	132,966	142,135	149,402	145,110	139,352
Bristol	364,590	364,637	381,569	398,488	444,301	474,641	506,325
Dukes	4,953	5,669	5,633	5,829	6,117	8,942	11,639
Essex	498,040	496,313	522,384	568,831	637,887	633,632	670,080
Franklin	49,612	49,453	52,747	54,864	59,210	64,317	70,092
Hampden	335,496	332,107	367,971	429,353	459,050	443,018	456,310
Hampshire	72,801	72,461	87,594	103,229	123,981	138,813	146,568
Middlesex	934,924	971,390	1,064,569	1,238,742	1,397,268	1,367,034	1,398,468
Nantucket	3,678	3,401	3,484	3,559	3,774	5,087	6,012
Norfolk	299,426	325,180	392,308	510,256	605,051	606,587	616,087
Plymouth	162,311	168,824	189,468	248,449	333,314	405,437	435,276
Suffolk	879,536	863,248	896,615	791,329	735,190	650,142	663,906
Worcester	491,242	504,470	546,401	583,228	637,969	646,352	709,705

Data taken from the United States Census

**Table F-3. Massachusetts Population by City and Town: 1980 and 1990**

City/Town	1980 US Census	1990 US Census	City/Town	1980 US Census	1990 US Census
ABINGTON	13,517	13,817	CAMBRIDGE	95,322	95,802
ACTON	17,544	17,872	CANTON	18,182	18,530
ACUSHNET	8,704	9,554	CARLISLE	3,306	4,333
ADAMS	10,381	9,445	CARVER	6,988	10,590
AGAWAM	26,271	27,323	CHARLEMONT	1,149	1,249
ALFORD	394	418	CHARLTON	6,719	9,576
AMESBURY	13,971	14,997	CHATHAM	6,071	6,579
AMHERST	33,229	35,228	CHELMSFORD	31,174	32,383
ANDOVER	26,370	29,151	CHELSEA	25,431	28,710
AQUINAH (GAY HEAD)	220	201	CHESHIRE	3,124	3,479
ARLINGTON	48,219	44,630	CHESTER	1,123	1,280
ASHBURNHAM	4,075	5,433	CHESTERFIELD	1,000	1,048
ASHBY	2,311	2,717	CHICOPEE	55,112	56,632
ASHFIELD	1,458	1,715	CHILMARK	489	650
ASHLAND	9,165	12,066	CLARKSBURG	1,871	1,745
ATHOL	10,634	11,451	CLINTON	12,771	13,222
ATTLEBORO	34,196	38,383	COHASSET	7,174	7,075
AUBURN	14,845	15,005	COLRAIN	1,552	1,757
AVON	5,026	4,558	CONCORD	16,293	17,076
AYER	6,993	6,871	CONWAY	1,213	1,529
BARNSTABLE	30,898	40,949	CUMMINGTON	657	785
BARRE	4,102	4,546	DALTON	6,797	7,155
BECKET	1,339	1,481	DANVERS	24,100	24,174
BEDFORD	13,067	12,996	DARTMOUTH	23,966	27,244
BELCHERTOWN	8,339	10,579	DEDHAM	25,298	23,782
BELLINGHAM	14,300	14,877	DEERFIELD	4,517	5,018
BELMONT	26,100	24,720	DENNIS	12,360	13,864
BERKLEY	2,731	4,237	DIGHTON	5,352	5,631
BERLIN	2,215	2,293	DOUGLAS	3,730	5,438
BERNARDSTON	1,750	2,048	DOVER	4,703	4,915
BEVERLY	37,655	38,195	DRACUT	21,249	25,594
BILLERICA	36,727	37,609	DUDLEY	8,717	9,540
BLACKSTONE	6,570	8,023	DUNSTABLE	1,671	2,236
BLANDFORD	1,038	1,187	DUXBURY	11,807	13,895
BOLTON	2,530	3,134	EAST BRIDGEWATER	9,945	11,104
BOSTON	562,994	574,283	EAST BROOKFIELD	1,955	2,033
BOURNE	13,874	16,064	EAST LONGMEADOW	12,905	13,367
BOXBOROUGH	3,126	3,343	EASTHAM	3,472	4,462
BOXFORD	5,374	6,266	EASTHAMPTON	15,580	15,537
BOYLSTON	3,470	3,517	EASTON	16,623	19,807
BRAINTREE	36,337	33,836	EDGARTOWN	2,204	3,062
BREWSTER	5,226	8,440	EGREMONT	1,311	1,229
BRIDGEWATER	17,202	21,249	ERVING	1,326	1,372
BRIMFIELD	2,318	3,001	ESSEX	2,998	3,260
BROCKTON	95,172	92,788	EVERETT	37,195	35,701
BROOKFIELD	2,397	2,968	FAIRHAVEN	15,759	16,132
BROOKLINE	55,062	54,718	FALL RIVER	92,574	92,703
BUCKLAND	1,864	1,928	FALMOUTH	23,640	27,960
BURLINGTON	23,486	23,302	FITCHBURG	39,580	41,194

Table F-3 (Continued). Massachusetts Population by City and Town: 1980 and 1990

City/Town	1980 US Census	1990 US Census	City/Town	1980 US Census	1990 US Census
FLORIDA	730	742	LANESBOROUGH	3,131	3,032
FOXBOROUGH	14,148	14,637	LAWRENCE	63,175	70,207
FRAMINGHAM	65,113	64,989	LEE	6,247	5,849
FRANKLIN	18,217	22,095	LEICESTER	9,446	10,191
FREETOWN	7,058	8,522	LENOX	6,523	5,069
GARDNER	17,900	20,125	LEOMINSTER	34,508	38,145
GEORGETOWN	5,687	6,384	LEVERETT	1,471	1,785
GILL	1,259	1,583	LEXINGTON	29,479	28,974
GLOUCESTER	27,768	28,716	LEYDEN	498	662
GOSHEN	651	830	LINCOLN	7,098	7,666
GOSNOLD	63	98	LITTLETON	6,970	7,051
GRAFTON	11,238	13,035	LONGMEADOW	16,301	15,467
GRANBY	5,380	5,565	LOWELL	92,418	103,439
GRANVILLE	1,204	1,403	LUDLOW	18,150	18,820
GREAT BARRINGTON	7,405	7,725	LUNENBURG	8,405	9,117
GREENFIELD	18,436	18,666	LYNN	78,471	81,245
GROTON	6,154	7,511	LYNNFIELD	11,267	11,274
GROVELAND	5,040	5,214	MALDEN	53,386	53,884
HADLEY	4,125	4,231	MANCHESTER	5,424	5,286
HALIFAX	5,513	6,526	MANSFIELD	13,453	16,568
HAMILTON	6,960	7,280	MARBLEHEAD	20,126	19,971
HAMPDEN	4,745	4,709	MARION	3,932	4,496
HANCOCK	643	628	MARLBOROUGH	30,617	31,813
HANOVER	11,358	11,912	MARSHFIELD	20,916	21,531
HANSON	8,617	9,028	MASHPEE	3,700	7,884
HARDWICK	2,272	2,385	MATTAPOISETT	5,597	5,850
HARVARD	12,170	12,329	MAYNARD	9,590	10,325
HARWICH	8,971	10,275	MEDFIELD	10,220	10,531
HATFIELD	3,045	3,184	MEDFORD	58,076	57,407
HAVERHILL	46,865	51,418	MEDWAY	8,447	9,931
HAWLEY	280	317	MELROSE	30,055	28,150
HEATH	482	716	MENDON	3,108	4,010
HINGHAM	20,339	19,821	MERRIMAC	4,451	5,166
HINSDALE	1,707	1,959	METHUEN	36,701	39,990
HOLBROOK	11,140	11,041	MIDDLEBOROUGH	16,404	17,867
HOLDEN	13,336	14,628	MIDDLEFIELD	385	392
HOLLAND	1,589	2,185	MIDDLETON	4,135	4,921
HOLLISTON	12,622	12,926	MILFORD	23,390	25,355
HOLYOKE	44,678	43,704	MILLBURY	11,808	12,228
HOPEDALE	3,905	5,666	MILLIS	6,908	7,613
HOPKINTON	7,114	9,191	MILLVILLE	1,693	2,236
HUBBARDSTON	1,797	2,797	MILTON	25,860	25,725
HUDSON	16,408	17,233	MONROE	179	115
HULL	9,714	10,466	MONSON	7,315	7,776
HUNTINGTON	1,804	1,987	MONTAGUE	8,011	8,316
IPSWICH	11,158	11,873	MONTEREY	818	805
KINGSTON	7,362	9,045	MONTGOMERY	637	759
LAKEVILLE	5,931	7,785	MOUNT WASHINGTON	93	135
LANCASTER	6,334	6,661	NAHANT	3,947	3,828

**Table F-3 (Continued). Massachusetts Population by City and Town: 1980 and 1990**

City/Town	1980 US Census	1990 US Census	City/Town	1980 US Census	1990 US Census
NANTUCKET	5,087	6,012	READING	22,678	22,539
NATICK	29,461	30,510	REHOBOTH	7,570	8,656
NEEDHAM	27,901	27,557	REVERE	42,423	42,786
NEW ASHFORD	159	192	RICHMOND	1,659	1,677
NEW BEDFORD	98,478	99,922	ROCHESTER	3,205	3,921
NEW BRAINTREE	671	881	ROCKLAND	15,695	16,123
NEW MARLBOROUGH	1,160	1,240	ROCKPORT	6,345	7,482
NEW SALEM	688	802	ROWE	336	378
NEWBURY	4,529	5,623	ROWLEY	3,867	4,452
NEWBURYPORT	15,900	16,317	ROYALSTON	955	1,147
NEWTON	83,622	82,585	RUSSELL	1,570	1,594
NORFOLK	6,363	9,270	RUTLAND	4,334	4,936
NORTH ADAMS	18,063	16,797	SALEM	38,220	38,091
NORTH ANDOVER	20,129	22,792	SALISBURY	5,973	6,882
NORTH ATTLEBORO	21,095	25,038	SANDISFIELD	720	667
NORTH BROOKFIELD	4,150	4,708	SANDWICH	8,727	15,489
NORTH READING	11,455	12,002	SAUGUS	24,746	25,549
NORTHAMPTON	29,286	29,289	SAVOY	644	634
NORTHBOROUGH	10,568	11,929	SCITUATE	17,317	16,786
NORTHBRIDGE	12,246	13,371	SEEKONK	12,269	13,046
NORTHFIELD	2,386	2,838	SHARON	13,601	15,517
NORTON	12,690	14,265	SHEFFIELD	2,743	2,910
NORWELL	9,182	9,279	SHELburne	2,002	2,012
NORWOOD	29,711	28,700	SHERBORN	4,049	3,989
OAK BLUFFS	1,984	2,804	SHIRLEY	5,124	6,118
OAKHAM	994	1,503	SHREWSBURY	22,674	24,146
ORANGE	6,844	7,312	SHUTESBURY	1,049	1,561
ORLEANS	5,306	5,838	SOMERSET	18,813	17,655
OTIS	963	1,073	SOMERVILLE	77,372	76,210
OXFORD	11,680	12,588	SOUTH HADLEY	16,399	16,685
PALMER	11,389	12,054	SOUTHAMPTON	4,137	4,478
PAXTON	3,762	4,047	SOUTHBOROUGH	6,193	6,628
PEABODY	45,976	47,039	SOUTHBRIDGE	16,665	17,816
PELHAM	1,112	1,373	SOUTHWICK	7,382	7,667
PEMBROKE	13,487	14,544	SPENCER	10,774	11,645
PEPPERELL	8,061	10,098	SPRINGFIELD	152,319	156,983
PERU	633	779	STERLING	5,440	6,481
PETERSHAM	1,024	1,131	STOCKBRIDGE	2,328	2,408
PHILLIPSTON	953	1,485	STONEHAM	21,424	22,203
PITTSFIELD	51,974	48,622	STOUGHTON	26,710	26,777
PLAINFIELD	425	571	STOW	5,144	5,328
PLAINVILLE	5,857	6,871	STURBRIDGE	5,976	7,775
PLYMOUTH	35,913	45,608	SUDBURY	14,027	14,358
PLYMPTON	1,974	2,384	SUNDERLAND	2,929	3,399
PRINCETON	2,425	3,189	SUTTON	5,855	6,824
PROVINCETOWN	3,536	3,561	SWAMPSCOTT	13,837	13,650
QUINCY	84,743	84,985	SWANSEA	15,461	15,411
RANDOLPH	28,218	30,093	TAUNTON	45,001	49,832
RAYNHAM	9,085	9,867	TEMPLETON	6,070	6,438

**Table F-3 (Continued). Massachusetts Population by City and Town: 1980 and 1990**

City/Town	1980 US Census	1990 US Census	City/Town	1980 US Census	1990 US Census
TEWKSBURY	24,635	27,266	WINCHESTER	20,701	20,267
TISBURY	2,972	3,120	WINDSOR	598	770
TOLLAND	235	289	WINTHROP	19,294	18,127
TOPSFIELD	5,709	5,754	WOBURN	36,626	35,943
TOWNSEND	7,201	8,496	WORCESTER	161,799	169,759
TRURO	1,486	1,573	WORTHINGTON	932	1,156
TYNGSBOROUGH	5,683	8,642	WRENTHAM	7,580	9,006
TYRINGHAM	344	369	YARMOUTH	18,449	21,174
UPTON	3,886	4,677			
UXBRIDGE	8,374	10,415	Statewide Totals	5,640,985	5,919,881
WAKEFIELD	24,895	24,825			
WALES	1,177	1,566			
WALPOLE	18,859	20,212			
WALTHAM	58,200	57,878			
WARE	8,953	9,808			
WAREHAM	18,457	19,232			
WARREN	3,777	4,437			
WARWICK	603	740			
WASHINGTON	587	615			
WATERTOWN	34,384	33,284			
WAYLAND	12,170	11,874			
WEBSTER	14,480	16,196			
WELLESLEY	27,209	26,615			
WELLFLEET	2,209	2,493			
WENDELL	694	899			
WENHAM	3,897	4,212			
WEST BOYLSTON	6,204	6,611			
WEST BRIDGEWATER	6,359	6,389			
WEST BROOKFIELD	3,026	3,532			
WEST NEWBURY	2,861	3,421			
WEST SPRINGFIELD	27,042	27,537			
WEST STOCKBRIDGE	1,280	1,483			
WEST TISBURY	1,010	1,704			
WESTBOROUGH	13,619	14,133			
WESTFIELD	36,465	38,372			
WESTFORD	13,434	16,392			
WESTHAMPTON	1,137	1,327			
WESTMINSTER	5,139	6,191			
WESTON	11,169	10,200			
WESTPORT	13,763	13,852			
WESTWOOD	13,212	12,557			
WEYMOUTH	55,601	54,063			
WHATELY	1,341	1,375			
WHITMAN	13,534	13,240			
WILBRAHAM	12,053	12,635			
WILLIAMSBURG	2,237	2,515			
WILLIAMSTOWN	8,741	8,220			
WILMINGTON	17,471	17,651			
WINCHENDON	7,019	8,805			

**Table F-4. Population Counts and Estimates, Massachusetts: 1980, 1985-1999**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
0 - 4	1980	337,215	173,029	164,186
	1985	379,282	194,237	185,045
	1986	387,696	198,479	189,217
	1987	396,109	202,720	193,389
	1988	404,522	206,962	197,560
	1989	412,935	211,203	201,732
	1990	421,349	215,445	205,904
	1991	424,617	217,179	207,438
	1992	425,142	217,537	207,605
	1993	424,647	217,471	207,176
	1994	421,986	216,493	205,493
	1995	415,741	213,448	202,293
	1996	409,660	210,345	199,315
	1997	404,223	207,394	196,829
	1998	399,860	204,983	194,877
	1999	399,310	204,397	194,913
5 - 9	1980	374,734	191,602	183,132
	1985	375,677	192,542	183,135
	1986	375,865	192,730	183,135
	1987	376,054	192,918	183,136
	1988	376,242	193,106	183,136
	1989	376,431	193,294	183,137
	1990	376,619	193,482	183,137
	1991	384,465	197,306	187,159
	1992	388,956	199,564	189,392
	1993	392,430	201,241	191,189
	1994	399,236	204,404	194,832
	1995	404,660	206,980	197,680
	1996	410,066	209,813	200,253
	1997	414,757	212,313	202,444
	1998	414,810	212,483	202,327
	1999	423,609	217,197	206,412
10 - 14	1980	461,332	235,669	225,663
	1985	404,174	206,784	197,390
	1986	392,742	201,007	191,735
	1987	381,311	195,230	186,081
	1988	369,879	189,453	180,426
	1989	358,448	183,676	174,772
	1990	347,016	177,899	169,117
	1991	355,502	182,288	173,214
	1992	358,775	184,070	174,705
	1993	363,655	186,671	176,984
	1994	368,790	189,353	179,437
	1995	372,452	191,298	181,154
	1996	380,540	195,292	185,248
	1997	388,421	199,263	189,158
	1998	391,860	200,941	190,919
	1999	412,311	211,441	200,870

**Table F-4 (continued). Population Counts and Estimates, Massachusetts: 1980, 1985-1999**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
15-19	1980	548,239	274,859	273,380
	1985	482,135	242,074	240,061
	1986	468,914	235,517	233,397
	1987	455,693	228,960	226,733
	1988	442,472	222,403	220,069
	1989	429,251	215,846	213,405
	1990	416,030	209,289	206,741
	1991	391,939	197,402	194,537
	1992	383,111	192,951	190,160
	1993	383,138	192,863	190,275
	1994	389,017	195,597	193,420
	1995	397,926	200,053	197,873
	1996	407,088	204,859	202,229
	1997	410,740	207,139	203,601
	1998	418,478	211,026	207,452
	1999	417,862	211,120	206,742
20-24	1980	552,902	270,713	282,189
	1985	535,048	263,685	271,363
	1986	531,477	262,279	269,198
	1987	527,907	260,874	267,033
	1988	524,335	259,468	264,867
	1989	520,765	258,063	262,702
	1990	517,194	256,657	260,537
	1991	514,576	255,360	259,216
	1992	516,059	256,092	259,967
	1993	508,509	252,385	256,124
	1994	497,732	247,056	250,676
	1995	486,412	241,442	244,970
	1996	469,010	232,807	236,203
	1997	463,895	230,140	233,755
	1998	465,352	230,886	234,466
	1999	435,534	215,192	220,342
25-29	1980	489,175	239,341	249,834
	1985	522,748	258,318	264,430
	1986	529,462	262,113	267,349
	1987	536,177	265,909	270,268
	1988	542,891	269,704	273,187
	1989	549,606	273,500	276,106
	1990	556,320	277,295	279,025
	1991	540,234	268,978	271,256
	1992	529,711	263,810	265,901
	1993	518,304	258,294	260,010
	1994	512,557	255,973	256,584
	1995	510,664	255,351	255,313
	1996	514,088	257,258	256,830
	1997	511,765	256,137	255,628
	1998	502,345	251,390	250,955
	1999	468,891	232,721	236,170

**Table F-4 (continued). Population Counts and Estimates, Massachusetts: 1980, 1985-1999**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
30-34	1980	446,395	217,649	228,746
	1985	494,363	243,175	251,188
	1986	503,956	248,280	255,676
	1987	513,549	253,385	260,164
	1988	523,143	258,491	264,652
	1989	532,737	263,596	269,141
	1990	542,330	268,701	273,629
	1991	547,724	272,103	275,621
	1992	543,398	270,256	273,142
	1993	539,945	268,647	271,298
	1994	537,869	267,675	270,194
	1995	529,735	263,782	265,953
	1996	518,478	258,141	260,337
	1997	512,473	255,510	256,963
	1998	502,992	251,066	251,926
	1999	498,617	247,105	251,512
35-39	1980	348,552	169,502	179,050
	1985	414,863	203,352	211,511
	1986	428,125	210,122	218,003
	1987	441,387	216,892	224,495
	1988	454,650	223,662	230,988
	1989	467,912	230,432	237,480
	1990	481,174	237,202	243,972
	1991	492,003	242,601	249,402
	1992	501,299	247,290	254,009
	1993	508,723	251,039	257,684
	1994	517,102	255,251	261,851
	1995	522,467	258,017	264,450
	1996	527,036	260,758	266,278
	1997	525,899	260,595	265,304
	1998	522,796	259,389	263,407
	1999	532,463	263,328	269,135
40-44	1980	278,748	134,925	143,823
	1985	356,061	173,162	182,899
	1986	371,523	180,809	190,714
	1987	386,986	188,457	198,529
	1988	402,449	196,104	206,345
	1989	417,912	203,752	214,160
	1990	433,374	211,399	221,975
	1991	452,459	221,123	231,336
	1992	448,133	219,257	228,876
	1993	450,944	220,919	230,025
	1994	458,221	224,614	233,607
	1995	466,848	229,037	237,811
	1996	477,644	234,298	243,346
	1997	489,729	240,396	249,333
	1998	496,569	243,966	252,603
	1999	510,253	250,285	259,968



**Table F-4 (continued). Population Counts and Estimates, Massachusetts: 1980, 1985-1999**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
45-49	1980	278,261	134,444	143,817
	1985	305,798	148,540	157,258
	1986	311,305	151,359	159,946
	1987	316,812	154,178	162,634
	1988	322,320	156,998	165,322
	1989	327,827	159,817	168,010
	1990	333,334	162,636	170,698
	1991	347,758	169,614	178,144
	1992	372,449	181,639	190,810
	1993	388,267	189,222	199,045
	1994	405,627	197,458	208,169
	1995	424,194	206,334	217,860
	1996	440,676	214,576	226,100
	1997	439,700	214,255	225,445
	1998	442,352	215,783	226,569
	1999	452,918	220,796	232,122
50-54	1980	306,574	146,211	160,363
	1985	284,588	136,396	148,192
	1986	280,190	134,433	145,757
	1987	275,793	132,470	143,323
	1988	271,396	130,507	140,889
	1989	266,998	128,544	138,454
	1990	262,601	126,581	136,020
	1991	266,799	128,835	137,964
	1992	274,537	132,602	141,935
	1993	291,124	140,790	150,334
	1994	305,629	148,204	157,425
	1995	317,854	154,500	163,354
	1996	331,747	161,214	170,533
	1997	359,036	174,461	184,575
	1998	376,308	182,775	193,533
	1999	394,565	191,345	203,220
55-59	1980	310,995	145,603	165,392
	1985	281,585	132,889	148,696
	1986	275,702	130,346	145,356
	1987	269,820	127,803	142,017
	1988	263,939	125,261	138,678
	1989	258,056	122,718	135,338
	1990	252,174	120,175	131,999
	1991	243,598	116,332	127,266
	1992	239,741	114,800	124,941
	1993	238,223	114,215	124,008
	1994	240,256	115,150	125,106
	1995	243,035	116,491	126,544
	1996	248,445	119,247	129,198
	1997	258,444	124,059	134,385
	1998	275,482	132,476	143,006
	1999	293,440	141,003	152,437

**Table F-4 (continued). Population Counts and Estimates, Massachusetts: 1980, 1985-1999**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
60-64	1980	277,384	126,323	151,061
	1985	269,645	123,966	145,679
	1986	268,097	123,495	144,602
	1987	266,549	123,023	143,526
	1988	265,001	122,552	142,449
	1989	263,453	122,080	141,373
	1990	261,905	121,609	140,296
	1991	252,853	117,797	135,056
	1992	243,758	113,682	130,076
	1993	236,302	110,383	125,919
	1994	229,887	107,716	122,171
	1995	225,426	105,979	119,447
	1996	221,450	104,381	117,069
	1997	220,318	104,206	116,112
	1998	220,073	104,333	115,740
	1999	228,893	108,256	120,637
65-69	1980	235,574	101,023	134,551
	1985	243,479	105,724	137,755
	1986	245,060	106,664	138,396
	1987	246,641	107,604	139,037
	1988	248,221	108,544	139,677
	1989	249,802	109,484	140,318
	1990	251,383	110,424	140,959
	1991	242,200	107,138	135,062
	1992	239,439	106,603	132,836
	1993	236,419	106,028	130,391
	1994	233,259	105,261	127,998
	1995	229,328	103,887	125,441
	1996	226,174	102,090	124,084
	1997	220,342	99,675	120,667
	1998	224,578	102,051	122,527
	1999	221,157	100,777	120,380
70-74	1980	187,041	73,235	113,806
	1985	197,186	79,388	117,798
	1986	199,215	80,619	118,596
	1987	201,244	81,849	119,395
	1988	203,273	83,080	120,193
	1989	205,302	84,310	120,992
	1990	207,331	85,541	121,790
	1991	206,064	85,541	120,523
	1992	207,286	86,411	120,875
	1993	207,610	86,774	120,836
	1994	209,543	88,009	121,534
	1995	211,201	89,345	121,856
	1996	210,014	88,742	121,272
	1997	209,512	89,113	120,399
	1998	217,425	93,318	124,107
	1999	214,991	92,667	122,324

**Table F-4 (continued). Population Counts and Estimates, Massachusetts: 1980, 1985-1999**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
75-79	1980	137,828	48,145	89,683
	1985	148,741	53,591	95,150
	1986	150,923	54,680	96,243
	1987	153,105	55,769	97,336
	1988	155,298	56,869	98,429
	1989	157,471	57,948	99,523
	1990	159,653	59,037	100,616
	1991	157,534	59,176	98,358
	1992	157,819	59,824	97,995
	1993	158,987	60,752	98,235
	1994	161,268	62,072	99,196
	1995	162,986	63,262	99,724
	1996	166,496	64,548	101,948
	1997	169,323	66,029	103,294
	1998	178,254	69,719	108,535
	1999	182,156	72,061	110,095
80-84	1980	92,180	28,513	63,667
	1985	99,240	30,991	68,249
	1986	100,651	31,486	69,165
	1987	102,064	31,982	70,082
	1988	103,475	32,477	70,998
	1989	104,888	32,973	71,915
	1990	106,299	33,468	72,831
	1991	106,558	33,989	72,569
	1992	108,271	34,969	73,302
	1993	109,369	35,782	73,587
	1994	110,817	36,721	74,096
	1995	112,913	37,919	74,994
	1996	114,039	38,664	75,375
	1997	114,787	39,273	75,514
	1998	121,228	41,932	79,296
	1999	126,467	44,435	82,032
85+	1980	73,908	20,107	53,801
	1985	82,124	21,006	61,118
	1986	83,767	21,186	62,581
	1987	85,410	21,366	64,044
	1988	87,052	21,545	65,507
	1989	88,696	21,725	66,971
	1990	90,339	21,905	68,434
	1991	91,218	22,231	68,987
	1992	99,184	24,479	74,705
	1993	106,943	26,789	80,154
	1994	107,996	27,258	80,738
	1995	108,970	27,600	81,370
	1996	111,703	28,439	83,264
	1997	114,258	29,558	84,700
	1998	120,501	31,447	89,054
	1999	119,093	31,435	87,658

**Table F-4 (continued). Population Counts and Estimates, Massachusetts: 1980, 1985-1999**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
TOTAL	1980	5,737,037	2,730,893	3,006,144
	1985	5,876,737	2,809,820	3,066,917
	1986	5,904,670	2,825,604	3,079,066
	1987	5,932,611	2,841,389	3,091,222
	1988	5,960,548	2,857,176	3,103,372
	1989	5,988,490	2,872,961	3,115,529
	1990	6,016,425	2,888,745	3,127,680
	1991	6,018,101	2,894,993	3,123,108
	1992	6,037,068	2,905,836	3,131,232
	1993	6,063,539	2,920,265	3,143,274
	1994	6,106,792	2,944,265	3,162,527
	1995	6,142,812	2,964,725	3,178,087
	1996	6,184,354	2,985,472	3,198,882
	1997	6,227,622	3,009,516	3,218,106
	1998	6,291,263	3,039,964	3,251,299
	1999	6,332,530	3,055,561	3,276,969

## APPENDICES



STATE USE ONLY

PLACE

HOSP.

TYPE

SEX

HSP RACE

EDUC.

AGE

NATIVITY

MARITAL

RESID.

OUT-STATE

DISP.

AUTOP.

MED EXAM

MANNER

WORKING

PLACE

CERT

IN PRO

DECEDENT

INFORMANT

DISPOSITION

CERTIFIER

CK INK ONLY

DECEDENT - NAME		FIRST		MIDDLE		LAST		SEX	DATE OF DEATH (Mo., Day, Yr.)	
1		2		3		4		5	6	
PLACE OF DEATH (City/Town)		COUNTY OF DEATH		HOSPITAL OR OTHER INSTITUTION - Name (If not in either, give street and number)		7		8		
4a		4b		4c		5		6		
PLACE OF DEATH (Check only one): HOSPITAL: <input type="checkbox"/> Inpatient <input type="checkbox"/> ER/Outpatient <input type="checkbox"/> DOA OTHER: <input type="checkbox"/> Nursing Home <input type="checkbox"/> Residence <input type="checkbox"/> Other (Specify)		SOCIAL SECURITY NUMBER		IF US WAR VETERAN SPECIFY WAR		7		8		
5		6		7		8		9		
WAS DECEDENT OF HISPANIC ORIGIN? (If yes, Specify Puerto Rican, Dominican, Cuban, etc.) C.M.O. <input type="checkbox"/> YES <input type="checkbox"/> NO 8a Specify:		RACE (e.g. White, Black, American Indian, etc.) (Specify):		DECEDENT'S EDUCATION (Highest Grade Completed) Elem/Sec (0-12) College (1-4, 5+)		9		10		
AGE - Last Birthday (Yrs.)		UNDER 1 YEAR MOS DAYS		UNDER 1 DAY HOURS MINS		DATE OF BIRTH (Mo., Day, Yr.)		BIRTHPLACE (City and State or Foreign Country)		
10a		10b		10c		10d		11		
MARRIED, NEVER MARRIED WIDOWED OR DIVORCED		LAST SPOUSE (If wife, give maiden name)		USUAL OCCUPATION (Prior - if retired)		KIND OF BUSINESS OR INDUSTRY		14		
12		13		14a		14b		14c		
RESIDENCE - NO. & ST., CITY/TOWN, COUNTY, STATE		ZIP CODE		15a		15b		15c		
FATHER - FULL NAME		DATE OF BIRTH (If not in US, name country)		MOTHER - NAME (GIVEN) (MAIDEN)		STATE OF BIRTH (If not in US, name country)		19		
16		17		18		19		20		
INFORMANT'S NAME		MAILING ADDRESS - NO. & ST., CITY/TOWN, STATE, ZIP CODE		RELATIONSHIP		21		22		
20		21		22		23		24		
METHOD OF DISPOSITION <input type="checkbox"/> BURIAL <input type="checkbox"/> CREMATION <input type="checkbox"/> ENTOMBMENT <input type="checkbox"/> REMOVAL FROM STATE 23 <input type="checkbox"/> DONATION <input type="checkbox"/> OTHER SPEC:		FUNERAL SERVICE LICENSEE LICENSE #		24		25		26		
26a		26b		26c		26d		26e		
DATE OF DISPOSITION (Mo., Day, Yr.)		NAME AND ADDRESS OF FACILITY		26a		26b		26c		
27		28a		28b		28c		28d		
29 PART I - Enter the diseases, injuries, or complications that caused the death. Do not use only the mode of dying, such as cardiac or respiratory arrest, shock or heart failure. List only one cause on each line (a through d). PRINT OR TYPE LEGIBLY. IMMEDIATE CAUSE (Final disease or condition resulting in death) ->		Approximate Interval Between Onset and Death		30		31		32		
30		31		32		33		34		
35		36		37		38		39		
35a		35b		35c		35d		35e		
36a		36b		36c		36d		36e		
37a		37b		37c		37d		37e		
38a		38b		38c		38d		38e		
39a		39b		39c		39d		39e		
40a		40b		40c		40d		40e		
41		42		43		44		45		



DEPARTMENT OF PUBLIC HEALTH  
REGISTRY OF VITAL RECORDS AND STATISTICS  
STANDARD CERTIFICATE OF LIVE BIRTH

H	3	PLACE OF BIRTH 3B. CITY/TOWN	3E. REGISTERED NUMBER	
	I	3A. FACILITY NAME—IF NOT IN FACILITY, NUMBER AND STREET		
L	NAME 4A. FIRST                      4B. MIDDLE                      4C. LAST			
D	5. SEX	6A. PLURALITY (Specify Single, Twin, etc.)	6B. BIRTH ORDER (If not single, Specify Order, First, Second, etc.)	7. TIME M
C E R T I F I C A T E  M O T H E R  F A T H E R  I N F O R M A N T	8A. SIGNATURE (If Certify that the Child was Born Alive at Date and Time and Place State'd)		8B. TYPE OR PRINT NAME	
	9A. NO. & STREET		9B. CITY/TOWN	9C. LICENSE NUMBER
	9D. TYPE <input type="checkbox"/> AT-BIRTH <input type="checkbox"/> POST-NATAL <input type="checkbox"/> CERTIFIER ONLY <input type="checkbox"/> MIDWIFE <input type="checkbox"/> OTHER		9E. STATE	9F. DATE SIGNED (Month, Day, Year)
	10A. FIRST		10B. MIDDLE	10C. LAST
	10D. MAIDEN SURNAME			
	11A. CITY/TOWN		11B. STATE/COUNTRY	
	12. DATE OF BIRTH (Month, Day, Year)			
	13A. NUMBER AND STREET (Do not use mailing address)		13B. CITY/TOWN	13C. COUNTY
	13D. STATE		13E. ZIP CODE	
	14A. FIRST		14B. MIDDLE	14C. LAST
15A. CITY/TOWN		15B. STATE/COUNTRY		
16. DATE OF BIRTH (Month, Day, Year)				
17A. I (WE) CERTIFY THAT THE PERSONAL INFORMATION APPEARING ABOVE IS TRUE AND CORRECT.		17B. RELATIONSHIP TO CHILD		
17C. DATE SIGNED (Month, Day, Year)		17D. MAILING ADDRESS (If different from item # 13 above)		
18. DATE OF RECORD (Month, Day, Year)		19. SUPPLEMENT FILED (Month, Day, Year)		
20. CLERK/REGISTRAR				
21. CLERK/REGISTRAR DPH USE ONLY				



# REPORT OF FETAL DEATH

STATE FILE NUMBER

1. HOSPITAL—NAME (If not in hospital, give street and number)				2. CITY, TOWN OR LOCATION OF DELIVERY				3. COUNTY OF DELIVERY			
4. DATE OF DELIVERY (Month, Day, Year)				5. HOUR OF DELIVERY				6. SEX OF FETUS			
7. MOTHER—MAIDEN NAME FIRST MIDDLE LAST				8. AGE (at time of this delivery)				9. RESIDENCE—STATE			
10. CITY, TOWN OR LOCATION				11. STREET AND NUMBER				12. COUNTY			
13. RACE—(e.g., White, Black, American Indian, etc.) (Specify)				14. EDUCATION (Specify only highest grade completed) (Elementary or Secondary 10-12) College 11-4 or 5+1				15. DATE LAST MENSTRUATION BEGAN (Month, Day, Year)			
16. IS MOTHER MARRIED? (Specify yes or no)				17. MONTH OF PREGNANCY PRENATAL CARE BEGAN (First, second, etc.) (Specify)				18. PRENATAL VISITS—Total number (If none, so state)			
19. THIS BIRTH—Single, Twin, triplet, etc. (Specify)				20. IF NOT SINGLE BIRTH—Born first, second, third, etc. (Specify)				21. DATE OF LAST LIVE BIRTH (Month, Year)			
22. DATE OF LAST OTHER TERMINATION (as indicated in d or e above) (Month, Year)				23. LIVE BIRTHS (Complete each section) 11a. Born living Number <input type="text"/> 11b. Born dead Number <input type="text"/> None <input type="checkbox"/> None <input type="checkbox"/>				24. OTHER TERMINATIONS (Specify cause and date) 11d. Before 20 weeks Number <input type="text"/> 11e. After 20 weeks Number <input type="text"/> None <input type="checkbox"/> None <input type="checkbox"/> (Do not include stillbirths)			
25. FATHER—NAME FIRST MIDDLE LAST				26. AGE (at time of this delivery)				27. RACE—(e.g., White, Black, American Indian, etc.) (Specify)			
28. EDUCATION (Specify only highest grade completed) (Elementary or Secondary 10-12) College 11-4 or 5+1				29. MONTH OF PREGNANCY PRENATAL CARE BEGAN (First, second, etc.) (Specify)				30. PRENATAL VISITS—Total number (If none, so state)			

MOTHER

FATHER

CAUSE OF FETAL DEATH

31. PART I Field or maternal condition directly causing fetal death.		IMMEDIATE CAUSE (ENTER ONLY ONE CAUSE PER LINE FOR 31a AND 31b.)		32. Specify Fetal or Maternal	
31a. DUE TO, OR AS A CONSEQUENCE OF:		31b. DUE TO, OR AS A CONSEQUENCE OF:		32. Specify Fetal or Maternal	
31c. OTHER SIGNIFICANT CONDITIONS OF FETUS OR MOTHER: Conditions contributing to fetal death but not related to cause given in 31a		33. FETUS DIED BEFORE LABOR, DURING LABOR, OR DELIVERY, UNKNOWN (Specify)		34. PHYSICIAN'S ESTIMATE OF GESTATION Weeks <input type="text"/>	
35. COMPLICATIONS OF PREGNANCY (Describe or write "none")		36. COMPLICATIONS OF LABOR AND/OR DELIVERY (Describe or write "none")		37. AUTOPSY (Specify yes or no)	
38. CONCURRENT ILLNESSES OR CONDITIONS AFFECTING THE PREGNANCY (Describe or write "none")		39. CONGENITAL MALFORMATIONS OR ANOMALIES OF FETUS (Describe or write "none")		40. NAME OF PHYSICIAN OR ATTENDANT (Type or print)	
41. NAME OF PERSON COMPLETING REPORT (Type or print)		42. TITLE		43. NAME OF HOSPITAL OR BY HOSPITAL	

DISPOSITION

CERTIFY

44. NAME OF FUNERAL DIRECTOR (If any)		45. NAME OF FACILITY (Hospital or Funeral Home)		46. ADDRESS OF FACILITY	
47. SIGNATURE OF ATTENDING PHYSICIAN OR MEDICAL EXAMINER		48. TITLE		49. LOCATION CITY OR TOWN STATE	

## DEFINITION:

"Fetal death" per chapter 111 section 202 of the M.G.L. means death prior to the complete expulsion or extraction from its mother of a fetus, irrespective of the duration of pregnancy, as indicated by the fact that after such expulsion or extraction the fetus does not breathe or show any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. A fetal death does NOT include an induced abortion as defined in section 12K of chapter 112 of M.G.L.. Spontaneous abortions are to be included.

## TO BE REPORTED:

Only fetal deaths of twenty weeks or more gestation or of a weight of 350 grams or more are to be reported.

## INSTRUCTIONS:

Return completed reported within 10 days to the Registry of Vital Records and Statistics, Rm.



DEPARTMENT OF PUBLIC HEALTH  
REGISTRY OF VITAL RECORDS AND STATISTICS

CERTIFICATE OF MARRIAGE

This certificate must be delivered to the person before whom the marriage is to be contracted before he proceeds to solemnize the same

(State file number)

(City or town making record)

Registered No. \_\_\_\_\_

Location No. \_\_\_\_\_

1 Place of Marriage

City or Town \_\_\_\_\_

(Do not enter name of village or section of city or town)

2 Date of Marriage

(Month)

(Day)

(Year)

3 FULL NAME

GROOM

12 FULL NAME

BRIDE

3A SURNAME  
AFTER MARRIAGE

12A SURNAME  
AFTER MARRIAGE

4 DATE OF BIRTH

5 OCCUPATION

13 DATE OF BIRTH

14 OCCUPATION

6 RESIDENCE  
NO. & ST.  
CITY/  
TOWN

ZIP  
CODE

15 RESIDENCE  
NO. & ST.  
CITY/  
TOWN

ST. ZIP  
CODE

7 NUMBER OF  
MARRIAGE  
(1st, 2nd, 3rd, etc.)

8 WIDOWED  
OR DIVORCED

16 NUMBER OF  
MARRIAGE  
(1st, 2nd, 3rd, etc.)

17 WIDOWED  
OR DIVORCED

9 BIRTHPLACE

18 BIRTHPLACE

(City or town)

(State or country)

(City or town)

(State or country)

10 MAIDEN NAME  
OF MOTHER

19 MAIDEN NAME  
OF MOTHER

11 NAME OF  
FATHER

20 NAME OF  
FATHER

21 THE INTENTION OF MARRIAGE by the above-mentioned persons was duly entered by me in the records of the Community according to law, this \_\_\_\_\_ day of \_\_\_\_\_

(Name of Community)

☐ COURT WAIVER Issued

(Month)

(Day)

(Year)

by \_\_\_\_\_

(City or Town Clerk or Registrar)

22 I HEREBY CERTIFY that I joined the above-named persons in marriage at No. \_\_\_\_\_

(If marriage was solemnized in a church, give its NAME instead of street and number)

(Name of church)

on \_\_\_\_\_

(Month)

(Day)

(Year)

Signature \_\_\_\_\_

Official station \_\_\_\_\_

(Minister of the Gospel, Clergyman, Priest, Rabbi, or Justice of the Peace)

Residence No. \_\_\_\_\_

St., City or Town of \_\_\_\_\_

23 Certificate recorded by city or town clerk

(Month)

(Day)

(Year)

CLERK OR REGISTRAR

THIS CERTIFICATE IS  
NOT TO BE USED  
ON THE REVERSE SIDE OF  
THIS CERTIFICATE.

NOT VALID AFTER:

THIS IS A PERMANENT RECORD.  
Only durable black ink or approved  
typewriter ribbon. Every item of  
information should be carefully supplied.  
ALTERATIONS AND ERASURES IN  
THIS CERTIFICATE ARE FORBIDDEN.  
PENALTY FOR VIOLATION,  
HUNDRED DOLLARS.

CHAP. 201, §§ 28, 28A, 48, 49,  
and CHAP. 46, § 18.

MEDICAL  
CERTIFICATES  
IN FILE

COMMISSION  
IN FILE

The Commonwealth of Massachusetts  
DEPARTMENT OF PUBLIC HEALTH  
REGISTRY OF VITAL RECORDS AND STATISTICS  
CERTIFICATE OF ABSOLUTE  
DIVORCE OR ANNULMENT  
(Chap. 208, Sec. 46 G.L.)  
R-408

HUSBAND - NAME		FIRST	MIDDLE	LAST
USUAL RESIDENCE - STREET ADDRESS			CITY, TOWN OR LOCATION	
2a.	2b.		2c.	
COUNTY	STATE	DATE OF BIRTH (Mo., Day, Yr.)	NUMBER OF THIS MARRIAGE (1st, 2nd, Specify)	
2c.	2d.	3.	4.	
WIFE - NAME		FIRST	MIDDLE	LAST
5a.		5b.		5c.
USUAL RESIDENCE - STREET ADDRESS			CITY, TOWN OR LOCATION	
6a.	6b.		6c.	
COUNTY	STATE	DATE OF BIRTH (Mo., Day, Yr.)	NUMBER OF THIS MARRIAGE (1st, 2nd, Specify)	
6c.	6d.	7.	8.	
DATE OF THIS MARRIAGE (Mo., Day, Yr.)	NUMBER OF CHILDREN BORN ALIVE OF THIS MARRIAGE		NUMBER OF CHILDREN UNDER AGE 18 IN THIS FAMILY	
9.	10a.	10b.		

<b>FOR COURT USE ONLY</b>			
COUNTY OF JUDGMENT		TITLE OF COURT	
11.	12.		13.
DATE OF JUDGMENT HSI (Mo., Day, Yr.)	TYPE OF JUDGMENT - DIVORCE OR ANNULMENT (Specify)		DATE OF JUDGMENT ABSOLUTE (Mo., Day, Yr.)
12.	13.		14.
DOCKET NUMBER	NAME OF PLAINTIFF	CAUSE FOR WHICH GRANTED	
15.	16.	17.	
SIGNATURE OF CERTIFYING OFFICIAL		TITLE OF OFFICIAL	
18a.		18b.	



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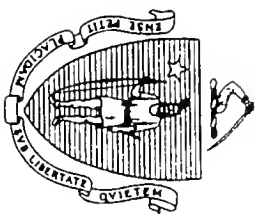
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